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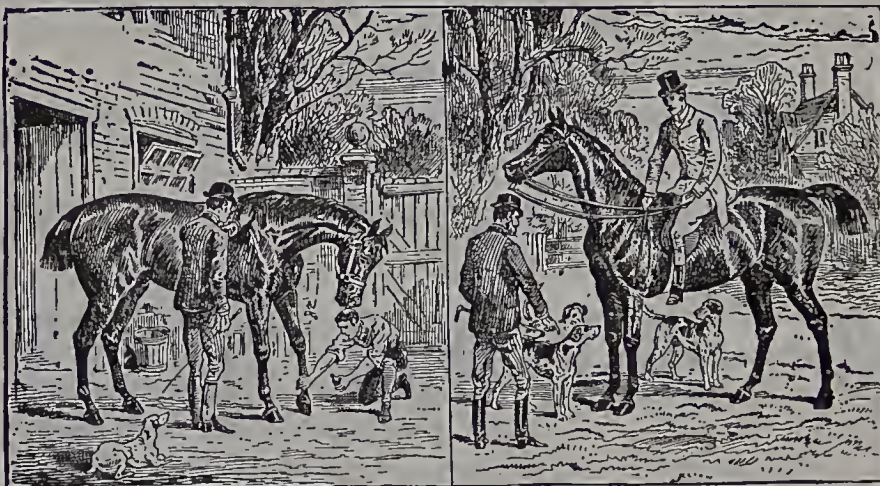
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"I have had over twenty-five years' experience as job-master in this city of Oporto, Portugal, and can safely declare I never, during my experience, used such a perfect remedy, and shall recommend it to everyone I know it would be useful to.

"GEORGE HENRY CORKER.

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"Being very attractive, they increase the sale of your valuable preparation."

H. A. DESCHAMPS, Kingston, Jamaica, August 28th, 1888.

RUMBO, THE PET BABY ELEPHANT, writes, April 9, 1889:—

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"RUMBO," 14 Thorpe Road, Forest Gate, E.

ELLIMAN'S ROYAL EMBROCATION, in Bottles, 2s., 2s. 6d., and 3s. 6d. each.

ELLIMAN'S UNIVERSAL EMBROCATION, in Bottles, 1s. 1½d. and 2s. 9d. each.

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The Sale of these Preparations is increasing rapidly in all parts of the world, to a very great extent through persons recommending them to others. No tricky advertisements issued, nor are Press Notices accepted, offered to secure an order for advertising.

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5—FACTS—5

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And see through all things with his half-shut eyes."—*Pope*.

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Do. Coffee and Chicory	In do. do.
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Prepared Taraxacum (Dandelion)	In $\frac{1}{4}$ and $\frac{1}{2}$ lb. Tins.
Do. do. with Pure Coffee	In do. do.
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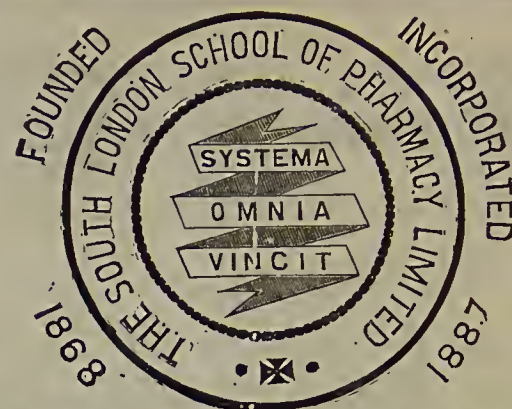
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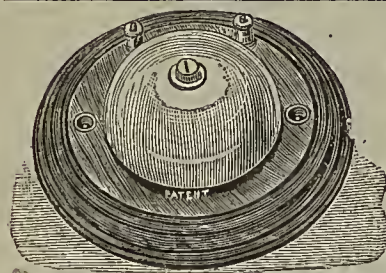
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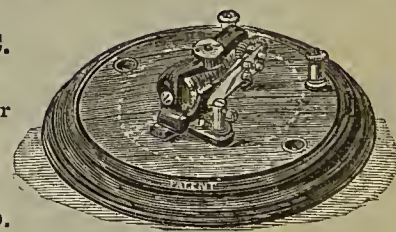


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Formulae.

Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

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The Chemist and Druggist, 1888 to 1889, complete with few exceptions, sale or exchange, particulars on application. Jones, Swinton, Rotherham.

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White gutta-percha tooth-stopping, 3d. sticks, 10d. gross; Puffs, assorted colours, retailing at 6d., 2s. 6d. dozen, 3 dozen for 7s.; post free. Complete case of operating instruments, like Maw's Fig. 8, cost 15l. 15s., will take 6l.; sent on approval. Lakeman, Chemist, Leytonstone.

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About 1 cwt. redwood, in fine powder, for disposal; what offers? 266/19.

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Carriage paid, sent on receipt of first P.O.—"Pharmaceutical Journal," 1877 to 1889, 12 vols. unbound, 20s.; "Dental Record," 1882 to 1889, 7 vols. unbound, 20s.; "Chemist and Druggist," 1877 to 1889 (10 missing), 16 vols. unbound, 30s.; "Chemist and Druggist Diary," clean, five years, 11s.; "Chemist's Surgery," Tomes, 1st ed., 3s.; do., do., 2nd ed., 5s.; do., Harris, 9th ed., 8s.; "Chemist's Mechanics," O'Coll's, 2nd ed., 4s.; do., Richardson, 1st ed., 6s.; "Metal," Bloxham and Huntington, 3s.; "Chemistry," Harcourt and Madan, 4th ed., 6s.; do., Attfield, 6th ed., 5s.; do., Fowncs, 3rd ed., 2s.; do., Muspratt's, 2nd vol., half calf, 21s.; "Botany," Balfour's Manual, 2nd ed., 4s.; do., do., class-book, 2s.; "Chemical Analysis," Purnell, 4s.; "Hydrophy," Smedley's, 1s. 6d.; "Physiology," Dawson, 2s.; do., Huxley, 2s.; "Progress of Pharmacy," Bell and Redwood, 2s.; "Materia Medica," Royle, 3rd ed., 2s.; "Natural Philosophy," Brooke, 6th ed., 3s.; "Circle of Sciences," Orr, 9 vols., 18s.; Hooper's "Medical Dictionary," 7th ed., bound, 8s.; "French Orthologer and Appendix," Mardoque's, 8s.; "History of the Earth," Goldsmith, 2 vols., half-calf, 12s.; Chamber's "Information for the People," 2 vols., half-calf, 10s. C. Westou, Ventnor, Isle Wight.

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Drawers, several nests, very cheap, with glass labels and glass knobs; desk, with glass case in front, 40s.; outside lamp, second-hand shop rounds, dispensing screen, and entire fittings of a chemist's shop, together or separate, great bargains. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

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Bargains.—(All numbers refer to Maw's list.)—12 ft. run mahogany-fronted drawers, glass knobs and glass labels, lockers, shelving, uprights, and cornices; 16 ft., 20 ft., and 24 ft. run ditto, cheap; plate glass wall case, 8 ft. long, as fig. A88; cheap line plate glass oiled fronted counters, &c.; dispensing screens, as fig. 54 and 55; ditto with silver glass centre and cases at each side, tablet on top of cases, "Dispensing Department," from 5 ft. to 8 ft., cheap. Elkanah Natali, 207 Old Street, Shoreditch.

Wall case, 9 ft. 8 in. long, 8 ft. 9 in. high, in two parts; ditto 3 ft. 4 in. long, 9 ft. high; several others cheap; sponge cases with bent top, as A 43; ditto, as fig. A41; show stand, as A37; soda water stand, as fig. A59; show stands; 3 plate glass shelves, as fig. 4; ditto, fig. 5, cheap; desks and cases, toothbrush cases, &c. Elkanah Natali, 207 Old Street, Shoreditch.

Counter cases, as fig. A18, 5 ft., 6 ft., 7 ft. 6 in., 8 ft.; ditto, A16, 4 ft. 8 in. long, 4 ft. long, 2 ft. 5 in. long; ditto, A15, 8 ft. long; 3 ditto, each 3 ft. long, as A8, 2 ft. 9 in., and 3 ft. 9 in., as fig. A3, 4 ft., 2 ft. 6 in., 3 ft. several others, all sizes, cheap. Elkanah Natali, 207 Old Street, Shoreditch.

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Four 3-gallon carboys, one 1-gallon tincture press. Nicholson, Chemist, Darlington.

Case hydrometers, quite new, cost 50s.; what cash offers? Sydney, 17 St. Michael's Street, Folkestone, Kent.

Microscopic slides; educational, medical, scientific, interesting, from 2s. 6d. dozen; lists free. B., 233 Maida Vale, W.

Bargain.—12 plate opopanax, 12 Fraugipanni, No. 30, French make, 7s. pint; samples 4 stamps. "Chemist," 7 Victoria Mount, Leeds.

40 50's very choice cigars, 5s. 6d. box, cost 7s.; 20 100's Princesses, 7s. 6d. box, cost 11s.; 5 100's 1885 Havannas, 24s., cost 32s.; re Louis Kahn. John Slater, Beeston Hill, Leeds.

Good student's microscope, with 50 slides, scientific and otherwise, in no way damaged or faulty, 3l., or exchange saleable patents; another, slightly damaged, 1l. Smith, Chemist, Pershore.

New run honey, beautiful golden colour, 6d. lb., in jars holding about 25 lbs. each; beeswax, warranted genuine, 1s. 3d. lb.; sample three stamps. Johnson, Chemist, Godalming.

New upright wall case, for railway or outside, bent glass front, 4 feet high by 11½ inches wide, 4 shelves; exchange 2/9 Beecham's, Whelpton's, or W. M. 103 syrup bottles. Plumstead Drug Company, S.E.

Black teats, good sized medium, fine rubber, 5s. per gross; same quality, two sizes smaller, 4s.; all india-rubber goods equally cheap; also spare 1s. breast-exhauster glasses and mouthpieces half list price. Butterworth, Pharmacist, Bradford.

Glass bottles, job lines.—About 50 gross 3-oz. pale green bottles for corks, suitable for pomade, vasoline, or furniture cream, 4s. per gross; 3 gross ½-pint (reputed) green glass syrups, 7s.; 2 gross pint ditto, 15s.; 3 gross 1-pint white glass syrups, 20s.; 3 gross 2-oz. white globe-necked panels, 7s. Hearn, Bottle Works, 381 Kingsland Road, London.

WANTED.

Freeman's Chlorodyne, 2s. 9d. 261/2.

Raphael's opsiometer; condition and price. Harvey, Margate.

No. 1 Simplissimus press, with accessories. Nicholson, Chemist Darlington.

An articulated human skull in good condition. A. Sutcliffe, 43 Whetley Lane, Bradford.

Chemist's lamp, wanted to purchase. Full particulars, with sketch, to "Rhobarb," 263/9.

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"British Pharmacopœia," 1885; pair counter scales. Mason, Bexley. Also large dispensing screen and counter.

Ssigell's syrup; Himrod's asthma cure; 4/6 Brown's Chlorodyne; Warner's safe cure; Beecham's. Birkbeck, Chemist, Lincoln.

Student's microscope, small pattern, 1 inch and ½ inch objectives, Zeiss, Swift, or Crouch. Cowan, Star Hill, Rochester.

Set of recess labelled shop rounds and pots, 20 or 30 oz.; two 2 or 3 gallon window carboys and stands; pill machine, good; scales, counter and dispensing, good; prices and condition. 265/26.

The Chemist and Druggist

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Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

OFFICES: 42 CANNON ST., LONDON, E.C.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that these may be sent in as early in the week as possible.

EXCHANGE COLUMN ADVERTISEMENTS will appear on page 8 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the next issue.

All Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSEY and crossed MARTIN & Co.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C. CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. Orridge & Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1. LONDON, E.C.—Dispensing and Retail Business, with fine handsome shop and good warehouse; returns about £1,250 yearly; stock large; the business can be extended; price about £1,100.

2. LONDON, S.W. Near Victoria Station.—Very nicely fitted shop; light Retail and Dispensing Business; good-class trade; returns rather over £700 yearly; house is very commodious, and is held on lease; very liberal terms to an immediate purchaser.

3. LONDON SUBURB, S.W.—Profitable mixed business; returns £1,100 yearly; capital opportunity for a good business man; comfortable house with garden; rent very moderate; price £800.

4. LONDON, W.C.—Retail and Dispensing; situation admits of large amount of business, being in the main thoroughfare; returns £800; increasing; handsome shop; price £200.

5. LONDON, S.E.—Dispensing, Prescribing, and General Retail; situate in a capital business locality; returns about £800 yearly, admitting of considerable increase; well fitted and attractive shop, and first rate stock; good 2-roomed house, with private entrance; price £750.

6. LONDON, N.E.—Retail and Dispensing Business, in a good middle-class locality; very nicely fitted shop, and comfortable house with garden; business returns £450; price about £450.

7. LONDON, N. (Within 25 miles of).—Death vacancy; an old-established good-class business; situate in a pleasant town; good roomy shop and excellent house; returns, under indifferent management, £450; about £450 required, to include house fixtures; full investigation.

8. WEST OF ENGLAND (Seaport).—Retail and Prescribing, and Dispensing Business; corner shop in very commanding position; returns £800 yearly; good house; price about £500. The business is unusually profitable, and can be much increased by a business man.

9. GLOUCESTER.—Dispensing and Retail Business; rapidly increasing; for disposal on account of vendor's ill health; present returns between £7 and £8 per week; good and attractive shop, and very convenient house; price about £300; very liberal terms to immediate purchaser.

10. SUSSEX.—Attractive locality; good-class dispensing and retail; established many years; returns about £700 yearly; full price for everything; modern shop; comfortable house and garden; price £640.

11. DEVON.—In a large fashionable town; an old-established business; nicely fitted shop; returns £600 yearly, with good profits; commodious house, held on lease; rent moderate; price about £600.

12. SOUTH OF ENGLAND (Seaside).—Dispensing, Prescribing, and Retail; very good class profitable business; returns £550; handsome shop; good house, garden, &c.; price about £550.

13. OXFORDSHIRE.—Mixed Business; returns about £2,000 yearly; business suited to a good business man who will do a pushing trade; price about £1,200.

14. SOUTH WALES (Seaport).—Prescribing, Dispensing, General Retail; returns £450 to £500 yearly; easily increased; well-fitted shop and good stock; price £400.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the special attention of a London agent.

SPECIAL NOTICE.—TO PRINCIPALS AND ASSISTANTS.

MESSRS. ORRIDGE & Co. Register Vacancies for Situations FREE OF CHARGE
ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

F. J. BRETT,

VALUER, LEICESTER,

60 St. Stephen's Road.

References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. 20 YEARS' EXPERIENCE.

MANCHESTER.—Good-class Retail, Dispensing; returns £700; net profit £300; price £500; illness sole cause of sale.

LIVERPOOL.—Select Retail and Dispensing; returns £600; rent £45; price £530.

BIRMINGHAM.—Light Retail, Dispensing, and Prescribing; returns over £600; rent low, on lease; goodwill £50; stock and fixtures at valuation, about £500.

SUSSEX.—Dispensing, Light Retail, and Prescribing, at good prices; pleasant seaside town; returns £500; price £450.

LANCASHIRE.—General, Retail, and Prescribing, with fair Dispensing; returns £1,600 (over); price £800.

SURREY.—Light suburban Retail; returns £300; price about £200; excellent opening for Dentistry.

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

CRYSTAL PALACE DISTRICT.—A small Retail and Dispensing Business; well fitted and stocked; lease about 16 years to run; good opening for Dentistry. "Drugs," Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.

FOR SALE.—An old-established Dispensing and Family Retail Business, with post-office attached; good house and convenient premises; satisfactory reasons for disposal; no reasonable offer refused. Learoyd, Washington Road, Sheffield.

SMALL Business for sale, at once; suit single man wanting time for study; or stock and fixtures by valuation (about £50); fixtures best quality and good as new. Apply, by letter only in first instance, to "Camphor," 39 Randall Street, Maidstone.

RUTHIN, North Wales; rare opening for a first-class Chemist.—Central business premises to be Let or Sold, adjoining the Post Office, facing the market square; double plate-glass front; premises in first-class repair. Apply to G. F. Byford, Ruthin.

LONDON, N.—Plate-glass front; well fitted shop; splendid position; three minutes from station; rent £34; 7-roomed house; present hands 6 years; proprietor leaving trade; price £75. "Bonum," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AN Old-established Drug and Grocery Business, lately carried on by W. G. Jackson, at Northgate, Hartlepool, admitted to be the finest situation for commerce in the town; the premises are licensed for Spirits and Wine, and Gilbey's Agency has been carried on with success for many years.

£400 will purchase a Light Retail and Dispensing Business; opposition almost nil; returns £600; very profitable; comfortable house, with good garden; same hands many years; good reasons for leaving; every inquiry courted. Further particulars to J. M., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

URGENT.—Proprietor's other engagements compel immediate sale of very old-established Light Retail; good class country town; price, valuation of stock and fixtures; a bargain to beginner; double-fronted house, nicely fitted; rent low; ample scope for large mixed trade; hours easy; no Sunday work. "Medicus," 1 Bradford Street, Shrewsbury.

£1,000 RETURNS.—Light Retail and Dispensing Business, within 10 miles of London; handsomely fitted shop; good house and garden; satisfactory reasons for leaving; low rent; long lease; price to immediate purchaser £800, or reasonable offer; fullest investigation allowed. Address, "Alpha," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, a small or neglected Business in a district with increasing population; state price, class of trade, and rent. A. Clarke, Poste Restante, London.

A LIGHT Retail, returning over £500, in good market town about 30 miles or more from London; state returns, class of trade, cash price, size of house, and reasons for disposal; must stand every inspection; agents, "Omega," care of Messrs. Wright, Layman & Umney, 1 Southwark Street, London, S.E.

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ADVERTISER is open to purchase a Business, Wholesale or Retail, or either, earning a net profit of from £700 to £2,000, or would purchase half share; must bear close investigation. Reply, with full particulars in strict confidence, to E. T., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, at once, a thoroughly genuine and reliable Business, returning upwards of £200 a year; suburbs of London or good market town preferred; cash ready, and early possession is desired. Send full particulars, in confidence, to W. R., care of Messrs. Hearon, Squire & Francis, 38 Southwark Street, London, S.E.

FOR SALE.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

TO BE SOLD.—Offers wanted for the fixtures, fittings, utensils, and small stock of Drugs, &c., of a Chemist and Druggist's shop, near Piccadilly Circus. Apply, "Proprietor," C. W. Austin, 35 Brewer Street, Golden Square, W.

A LARGE quantity of new shop rounds, gold labelled, very much under usual prices; 40 oz. 11s. 6d., 20 oz. 9s. 6d., 10 oz. 7s. per dozen, including labelling any names; also other sizes, and a quantity of blue scrubs and shop jars very cheap; any number supplied. "Drug," 83 Campbell Road, Stoke-on-Trent.

TO BE SOLD, a great bargain, and considerably below cost price for immediate realisation, the Stock-in-Trade, fixtures, and Appliances of a Retail Chemist and Druggist, with wine, spirit, and beer licences attached, situate at Kirton Lindsey, Lincolnshire; valuation about £350; a rare opportunity for an energetic man, and a good investment; one other Chemist only in the place. For full particulars apply Louthouse & Saltmer, Wholesale Druggists, Hull.

DISPENSING SCREENS.

FOR SALE. one 6-ft. Gothic (new design) mirror and marble slab in centre, £7 10s.; one 6-ft. with arched mirror centre, £2; one 6 ft., cheaper kind, £6; one 5-ft., £5; one 4-ft., £4 10s. R. Tomlinson & Sons, Bond Street, Birmingham.

DRAWERS, COUNTERS, SHOW CASES AND CARBOYS.

FOR SALE.—One 13 ft. range second-hand mahogany Drawers, lockers under and shelving over, £8; one 12 ft. range new mahogany drawers, with plate-glass labels and knobs, £9; one 12 ft. ditto, pine drawers, gold labels and glass knobs, £3 12s.; one 9 ft. mahogany top counter fitted with drawers, £5; one new bent Tooth Brush Case, 25s.; one 2 ft. second-hand mahogany Desk and glass case in front, 47s. 6d.; 3 3-gal. on 7s. 8d.; 4 4-gallon 10s., and 3 6-gallon carboys, 12s. 6d. each. R. Tomlinson & Sons, Medical Fitters, Bond Street, Constitution Hill, Birmingham.

TO LET.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

PRETTY VILLA. in select district, with Pharmacy attached; suit gentleman with means; exceptional advantages; nearest Chemist 3 miles. Address "Medicus," Messrs. Ayrton & Saunders, Duke Street, Liverpool.

APPRENTICESHIP.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED. an Apprentice or Improver. Apply to J. A. Eays, Newport, Mon.

WANTED, an apprentice by Chemist and Druggist; moderate premium, partly returned during term. J. Jones, Swinton, near Rotherham.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, a locum tenens. Apply by letter to H. Holbing, German Hospital, Dalston, N.E.

WANTED, Assistant (second); Retail; outdoors. Apply, by letter only, A. B., Mr. Jordan, 62 Kensington Park Road, S.W., London.

OUTDOOR; two qualified Assistants; quick and accurate Dispensers. Apply to the Manager, Drug Department, 105 Victoria Street, Westminster, S.W.

DISPENSER wanted by a Surgeon; time for reading; outdoors. State salary required and full particulars by letter, H. Parleigh's Library, High Street, Wandsworth.

JUNIOR or Improver wanted. Apply, with full particulars, to Jeans, 151 Oxford Street, Manchester.

JUNIOR, at once; state age, experience, salary required, &c. (outdoor). Peat & Co., Chemists, Accrington.

WHOLESALE.—A Junior Clerk wanted. Apply, stating age, &c., to Raines & Co., Wholesale Druggists, York.

WANTED, a qualified Assistant; good dispenser. Apply, stating salary, references, &c., to J. A., 145 Woodhouse Lane, Leeds.

JUNIOR wanted; indoors; must be used to good-class business; hours moderate. Apply, stating salary and references, W. R. Selleck, the High Street Pharmacy, Stourbridge.

WANTED, at once, Dispenser with Minor qualification; hours 9 to 7; outdoor. Apply by letter, stating salary required, &c., to the Chemist, Haymarket Stores, 28 Haymarket London S.W.

PERMANENCY.—Qualified Assistant wanted on March 1; outdoor; between 23 and 28 years of age. Apply, with full particulars, to Joseph Cowper, F.C.S., Pharmaceutical Chemist, Penrith.

WANTED, in a good Dispensing and Agricultural Business, a young man (just out of his apprenticeship) as Improver (outdoor). State age, height, salary required, and references to Thomas Martin, 16 Bedford Circus, Exeter.

WANTED, Improver (or one who has served a part apprenticeship) in a good-class business in a manufacturing town; must have good reference. Apply, stating full particulars with application to Mr. Prince, Chemist, Longton.

FOR CUMBERLAND.—A Junior Assistant; outdoors; able to dispense accurately; for a good-class business. Apply, stating age, height, experience, reference salary required, with photo and when at liberty, to "Dorax," Evans, Sons & Co., Liverpool.

OUTDOOR.—Dispensing Assistant wanted immediately, also an active and obliging young man for the Retail Counter; salary to commence at £95 per annum. Apply, with photo, stating age, height, and experience, to E. J. Kitson, Broad Street, Worcester.

MESSERS. BEETHAM & SON, Cbeithenham, are in want of a thoroughly competent Senior Assistant (indoor) about 30; must have been accustomed to first-class Family and Dispensing business; state salary, references, experience, &c., and send carte, which shall be returned.

WANTED, an energetic qualified man to take charge in the absence of principal of a Retail and small Wholesale business in the city; remuneration according to the abilities of the applicant. Apply in first instance to Z Y X, 255/5, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

T. C. TAYLOR, 20 Long Row, Nottingham, requires a Junior Assistant; a quick and accurate Dispenser, good writer, for first-class Family and Dispensing business. State age, experience, height, salary expected (indoor), and references, also enclose photo, which will be returned.

MR. CHARLES WHITE, 45 Buckingham Palace Road, London, S.W., is in want of a thoroughly competent Senior Assistant, not under 23; must have been accustomed to first-class Retail and Dispensing business; state salary, references, experience, and send carte, which will be returned.

SENIOR, qualified, for a first-class Dispensing business in a fashionable seaside resort; aged about 30; must be a gentleman of good address and well up in the business; good progressive salary. Address, stating age, height, enclosing photo, to F. L. S., care of York Glass Co., 69 Hatton Garden, London, E.C.

TRAVELLER wanted by an old-established firm to call upon Chemists, Saddlers, Ironmongers, &c., in the Midland Counties; good commission to a suitable person; part or whole time; security required. Reply with full particulars to T 5, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ASSISTANT; outdoor; well-up in Mechanical Dentistry; capable of taking full charge; to a suitable person a permanency; state usual particulars, age, height, references, photo if possible (to be returned), salary required; applications not replied to in 3 or 4 days declined. Address, Parker & Co., 152 Manchester Road, Bradford.

WORTHING INFIRMARY.—Wanted immediately, a Dispenser who must be duly qualified; salary £80 per annum, payable monthly; applications, with age and recent testimonials, must be sent to the Secretary not later than Tuesday, February 3. Information of the hours of attendance and duties may be had on application. Robert Grevelt, Secretary.

IMMEDIATELY.—Obliging and industrious Junior or Turnover for retail dispensing, and photographic dealer's business, or branch. Trustworthy, and of good address; tooth extractor and good salesman preferred. State age, height, experience, and salary (outdoors), enclosing photo and references to "Pharmacy," 67 Freeman Street, Grimsby. Also outdoor apprentice. Personal applications preferred.

IMMEDIATELY.—Assistant; indoors; Minor qualification; personal interview preferred; permanency. R. Humphreys, Pharmaceutical Chemist, 12A Upper Belsize Terrace, Hampstead, N.W.

WANTED, Junior Assistant (indoors) who must have a good general knowledge of a Mixed business; only those with exceptional references need apply; time for study. Willis, New Brompton.

WANTED, an Assistant, well up in Dispensing, and gentlemanly at the counter; Minor preferred. Apply, stating experience, salary, &c., to "Statim," care of Messrs. Sanger & Sons, 489 Oxford Street, W.

AT once, smart Dispenser; indoors; for first-class West-end cash business. Also Junior; stock and Counter. Apply, stating full particulars, to H. Messrs. Hodgkinson & Co., 198 Upper Whitecross Street, E.C.

QUALIFIED Assistant; active, and capable of taking entire management; state age, height, experience, and give last employer as reference. Address, "Mixed Business (Yorkshire)," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, at once, Assistant (qualified), of good appearance and address, for a good Dispensing and Retail business. Also a Junior; age, height, salary (indoor), experience, references, photo. W. Ashby, Chemist, Mansfield Road, Nottingham.

IMMEDIATELY, competent and qualified Assistant; age about 23; must have been accustomed to very good class Dispensing business; salary £60; indoors. Apply, with usual particulars, and enclosing photo, to R. Thomas, 38 Linnet Lane, Sefton Park, Liverpool.

WANTED, Junior Assistant to manage a Branch in a Lancashire village; Extract Teeth and a little Prescribing; plenty of time for study; no Sunday duty. Apply, stating age, salary, and reference, to James Watkinson, Chemist, Bolton Road, Walkden, near Bolton.

JUNIOR Assistant wanted (indoors), not under 20 years of age; for light country business; time allowed for study; must be able to prescribe and dispense. Apply, with reference (enclosing carte), stating age, salary required, &c., to W. Jacobs, Medical Hall, Guildford, Surrey.

ABOUT February 13.—An Assistant, indoors, with good provincial experience; must be a neat and accurate Dispenser, and well up in the business; first class references indispensable. State age, height, salary, and enclose carte, to Chave & Jackson, Pharmaceutical Chemists, Hereford.

WANTED, a qualified Assistant (Minor); single; indoors; must be thoroughly reliable; one able to extract teeth preferred; good salary to suitable man. State age, experience, and salary expected, or apply personally, if possible, to A. J. Mason, Chemist and Dentist, Bexley Heath, Kent.

SURGICAL Appliances, Druggists' Sundries, Wholesale and Retail.—Wanted, an outdoor Assistant of gentlemanly appearance; must have had some experience. Apply by letter, stating what experience, age, and salary required, to A. B. C., care of G. N. Read, Soa & Co., 49 Queen Victoria Street, E.C.

IMPROVER, for good-class London suburban Business; a qualified assistant kept; small salary; abstainer preferred, and good character indispensable; one requiring time for study might be treated with. Salary required, and full particulars, to Ph.C., care of Hearou & Co., 38 Sontbark Street, S.E.

WANTED, a young man who has a knowledge of the Surgical Instrument trade; one preferred who also knows something of the Drug business; must be able to give good reference. Apply, stating age, experience, salary required, &c. to "Instruments," care of W. & H. Hutchinson, Matilda Street, Sheffield.

WANTED immediately, a Junior Assistant (aged about 20 or 21) who has been brought up in a good country business; must be sharp and of agreeable manners, and whose character will bear investigation. Apply, enclosing carte (to be returned), to D. Prosser, Sheerness, naming salary and references.

WANTED, a gentlemanly Assistant, about 23, early in March; must be thoroughly competent and reliable, also well up in prescribing; one qualified and able to extract teeth preferred, though latter not essential. Apply personally, or by letter, enclosing photo, to be returned, to Dudson, Broadway, Manor Park, E.

WANTED immediately, an Assistant; indoors; accustomed to good mixed general trade; must be a neat dispenser, reliable and obliging. Apply, enclosing carte (to be returned), stating experience and salary required, to R. H. Kearnes, Bilston, Staffordshire. Hours from 8 to 8.15, except Monday and Saturday; no Sunday duty.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

EXPERIENCED Gentleman seeks a Dispensership. Poplars, Walsingham, Norfolk.

AS Junior; in London (21); 6½ years' experience; indoors; time for study. Knight, 204 Westgate, Bradford.

ASSISTANT; aged 24; tall; outdoors. G. Micholl, 6 Grenville Street, Bideford.

JUNIOR; London or suburbs; disengaged; aged 22. "Dispenser," 161 New Cross Road, S.E.

AS Assistant; aged 22; 7 years' experience; good references. J. S., 27, Walnut Street, Leicester.

AS Assistant (25); stores preferred; 9 years' experience. "Leech," 38 Alexandra Road, Wimbledon.

JUNIOR or Improver; can Extract, Prescribers, and Dispens. "Sassani," 6 Queen Street, Ulverston.

OUTDOOR; 10 years' good experience; aged 25; height, 5 ft. 8 in. F. C., 20 Park Street, Nottingham.

TEMPORARY; outdoor; branch; qualified; married; experienced; W., 113 Riversdale Road, Highbury, N.

DISPENSER; part time; disengaged 6 P.M. M., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AS Assistant in the wholesale; London; good references. T. M., 13 Post Office Buildings, Hoo Street, Walthamstow.

IMMEDIATELY; Assistant, aged 26; light retail and dispensing; 6 years' experience. "Beta," 47 High Street, Newport, I.W.

ASSISTANT or Branch Manager (qualified); can Prescribe and extract Teeth; aged 27 "Minor," 290 Euston Road, N.W.

JUNIOR; aged 21; 6 years' experience in Light Retail and Dispensing; good references. "Cornwall," 14 Dorset Street, Southampton.

IMPROVER; disengaged 14 h.; near London preferred; 4½ years' experience; aged 20 (Llunellon), 43 Tontine Street, Poolestone.

ASSISTANT; unqualified; aged 23; tall; experienced; London or South Coast. Thomas, 3 Wyndham Street, Bryanston Square, W.

ASSISTANT (22); height 5 ft. 9 in.; "branch" and dispensing experience; disengaged middle February. Franklin, Stapleford, Notts.

MANAGER or Assistant; all-round experience, with view to purchase; married; aged 36. "Statim," 13 Victoria Street, Blackburn.

IMPROVER or Junior; aged 1½; 5 years' experience in town and country; preliminary; references; abstainer. "Junior," Hickintown, Slough.

YOUNG Scotchman wishes engagement abroad; Africa or India preferred; 10 years' experience; good references as to character and ability. Fleming, 34 Cumber and Street, Edinburgh.

AS Assistant; Dispenser; locum tenens; 10 years' reference; well up in laboratory work and pre-ophth. g.; permanency preferred; smart appearance; good analyst. "Templus," 93 Liverpool Road, N.

MINERAL WATER Business.—Young man seeks situation as Working Man or Manager (10 years' experience); thoroughly understands bottling of ales, stouts, &c. C., "Mercury" Office, Bradford.

ASSISTANT, having Sundays free, is open to engagement; part or whole time; duty; town or suburbs; aged 25; West-end experience. "Chenol," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO Wholesale Druggists.—A Traveller, with long-standing connection over the entire southern and western counties, is open to an engagement. Address, W. S., care of Horner & Sons, Mitre Square, Aldgate, E.C.

A QUALIFIED Chemist desires position as Manager, with view to purchase by instalments. Full particulars as to returns, rent, population, &c., to "Disengaged," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ADVERTISER, having withdrawn from partnership in an old-established firm, is desirous of obtaining employment for a few weeks, pending arrangements; would not object to temporary management; aged 32. Address, A. Clarks, Poste Restante, London.

ADVERTISER, having an established connection among Chemists and Storekeepers in New South Wales, Victoria, and Queensland, and who is at present in London, would like to receive communications from Manufacturers wishing to be represented in those Colonies. Address, H. C., care of Ashby & Co., 26 Lendenhall Street, E.C.

ADVERTISER is desirous of meeting with appointment as Traveller, or other position, in good Wholesale Drug or Sundry house; good references, and can give ample security if required; would be glad to hear of Partnership, or any business where services and moderate capital would secure fair return. 287/31, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

PERSONS wishing to Purchase or Sell their Businesses will do well to communicate with Messrs. Fowler & Miller, Chemists' Transfer Agency for the North of England, 60 Fawcett Street, Sunderland.

DENTISTRY.—First-class Mechanical work undertaken for the Profession at moderate terms; good West-end references as to ability, &c.; punctuality guaranteed. W. E. Hill, 220 High Holborn, W.C.

PRELIMINARY AND MINOR.

ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. Student's Herbarium, 100 specimens, 7s. 6d., post free.

STUDENTS' AIDS TO EXAMINATION.

PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Caesar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. MINOR.—Equations Simplified, 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor, 6d. "Chemist," care of Mr. J. Edwards, Wye, Kent.

GLYCERINE & CUCUMBER,

First Quality, 9d. per lb., by using

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In Jars (free), ½ lb. 2s. 3d.; 1 lb. 4s. 3d. net.

Making 3 lbs. and 6 lbs., costing 1d. per oz., by simply adding Water and Glycerine.

Thro' any Wholesale House, or post free for P.O.

ROUSE & CO., 12 WIGMORE ST., LONDON, W.

THERE ARE TWO BOOKS

Which all Chemists ought to have and to read as faithfully as their British Pharmacopoeia, viz.,

ALPH'S

"HANDY BOOK OF MEDICINE STAMP DUTY"

(Price 2/6, by post 2/9), and

"THE ART OF DISPENSING"

(Price 3/6, by post 3/10).

Published at the Offices of "The Chemist and Druggist," LONDON AND MELBOURNE.

May be obtained from most Wholesale Houses, who invoice the Books at the published prices.

OUR WEEKLY SUPPLEMENT.

We have prepared a set of forms for small advertisements (assistants wanted, businesses for disposal, exchange column &c.). With these are attached tables of useful reference matter (Sale of Poisons, Postal Information, Annual Licences, Metric Weights, Measures, Medicine Stamps, Law and Public Offices, &c.). We shall be glad to send one of these sets to any subscriber who will send us an addressed postal wrapper (bearing a halfpenny stamp). As the object of this production is to encourage the insertion of such advertisements as we have named in THE CHEMIST AND DRUGGIST, we hope this offer will be taken advantage of chiefly by those subscribers who are willing to use this journal whenever opportunities occur.

OFFICES: 42 CANNON STREET, LONDON, E.C.

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Is a specially prepared volatile essence, distilled from a particular variety of pine, growing nearest the snow level on the Alps. It possesses exceptional medicinal properties when given internally, or in the form of inhalations, in the treatment of Pulmonary and Diathetic Affections, such as Phthisis, Rheumatism, Gout, &c. It is a valuable deodorizer and disinfectant, and has a peculiarly refreshing and fragrant odour.

PUMILINE JUJUBES

For Sore Throat, Cough, Hoarseness, &c., they give immediate relief.

PUMILINE LINIMENT

Specially beneficial for use in Chronic Rheumatism, Gout, Lumbago, Sciatica, &c. It is also invaluable for Throat and Chest Affections, and may be *taken internally, in doses of 2 to 5 drops.*

PUMILINE PLASTER

Is most effective in Chronic and Muscular Rheumatism, Lumbago, Sciatica, and also for Chest Affections.

PUMILINE EXTRACT

For Gout, Rheumatism, and Skin Disease; used in BATHS, Ointments, and Liniments.

PUMILINE OINTMENT

For all Skin Affections, Irritations, Insect Bites, Burns, &c. This Ointment is a fine smooth homogeneous application. It gives immediate relief in the intolerable itching of Eczema, &c. It is unrivalled both as a medicinal agent and toilet requisite.

PUMILINE SOAP

Is a carefully neutralised superfatted Soap, containing no free alkali, and is a Lubricant instead of a Desiccant to the skin. It is peculiarly adapted for use to the delicate skin of ladies and children. It leaves the skin smooth and satiny, and beautifies the complexion. The Pumiline Essence which it contains makes it a powerful disinfectant.

PUMILINE DRY INHALER

Most effective and convenient pocket inhaler for use in Throat or Lung Troubles. Is invaluable for use during a fog or mist.

G. & G. STERN have so arranged their Price List that a *very large margin of profit* is left to Chemists and to the Trade generally. In consideration of this, as well as the fact *that no other* Pine Preparations are in any way equal to STERN'S PUMILINE, Chemists will find it much to their advantage to stock the Pumiline Preparations.

PRICES—

	RETAIL	WHOLESALE.
PUMILINE ESSENCE	1/6 and 2/6 per bottle.....	15/ and 24/ per dozen.
PUMILINE EXTRACT	1/ per bottle.....	9/ per dozen.
PUMILINE JUJUBES	1/1½ and 2/3 per box	10/6 and 20/ per dozen.
PUMILINE OINTMENT	1/1½ and 2/9 per pot.....	11/ and 27/ per dozen.
PUMILINE LINIMENT	1/1½ and 2/9 per bottle	11/ and 27/ per dozen.
PUMILINE SOAP...(box of 3 cakes).....	1/6 and 9d., and 1/ per tablet.....	15/, 7/6, and 9/ per dozen.
PUMILINE PLASTER	1/1½ each	9/ per dozen.
PUMILINE DRY INHALER	1/6 each.....	14/ per dozen.

BESIDES WHICH AN ADDITIONAL DISCOUNT IS ALLOWED TO CHEMISTS AND THE TRADE.

G. & G. STERN, 62 Gray's Inn Road, LONDON, W.C.

Will send Show Cards and Literature Free on Application.

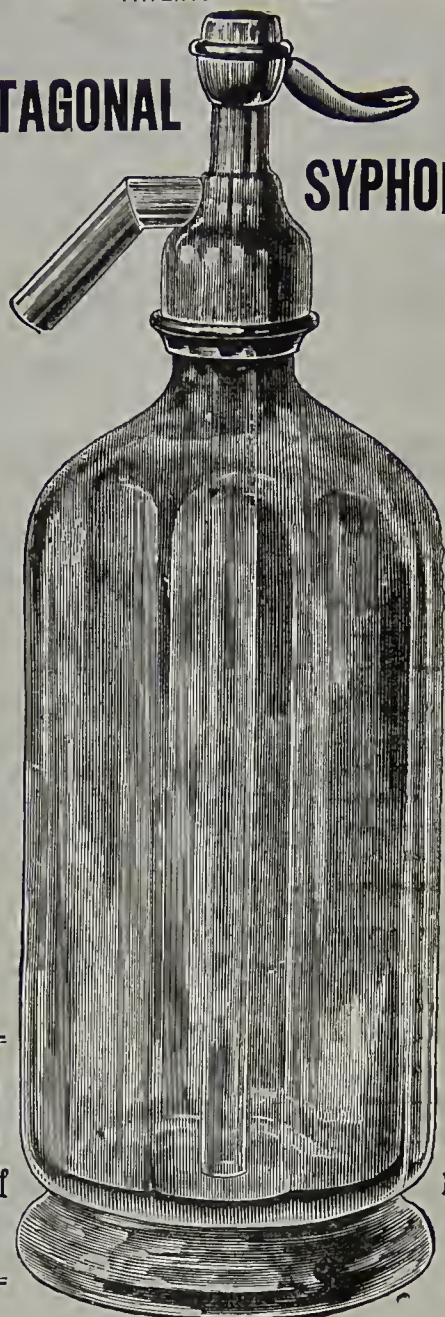
JAMES VIDIE ET FILS,

Pantin Glass Works,
PATENTERS OF THE

The "Octagonal" is externally similar to the ordinary Syphon, the interior being blown of an octagonal shape by a new patent process.

OCTAGONAL

SYPHON.

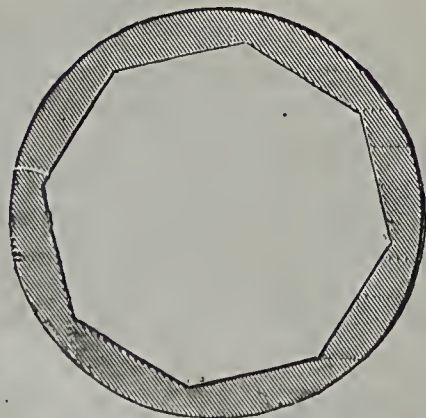


Gives a most brilliant and sparkling appearance to the contents, and can resist double the pressure of ordinary Vases. Greatly recommend our new tint, "AZURE BLUE," which is the best tint for Syphon Vases.

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TO BE HAD OF
ALL MINERAL WATER ENGINEERS.

TO BE HAD OF
ALL MINERAL WATER ENGINEERS.

SOLE AGENT:

C. MELIN, 37 CRUTCHED FRIARS, LONDON, E.C.

EIGHT PRIZE MEDALS AWARDED

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

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One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

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Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each

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Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

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Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

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Makes the Best Ginger-Beer. Packets, 3d. and 6d.

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For Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

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For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and 2s.

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In $\frac{1}{2}$ - and 1-pint boxes, 3d. and 6d. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

PATENT MEDICINES AND DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

“VINOLIA” POWDER.

“Vinolia” Powder resembles “Vinolia,” save that it is free from oleaginous matter, though the delicate unctuous feel it imparts might suggest the contrary. The presence of oil is contra-indicated in so many conditions of the skin that, after frequent solicitations on the part of prominent members of the Medical Profession, we have brought out “Vinolia” Powder. This Powder differs from any and every pulverulent substance hitherto introduced for the skin. It contains no rice powder, starch, oxide of zinc, bismuth, fuller’s earth, or violet powder, and is a most beautiful palpable substance, light, soft, and of lovely flocculence (not lumpy), and is free from the slightest trace of grittiness. It does not exert the least irritating action, but is, on the other hand, the blandest and most grateful of Powders. It is perfectly neutral in reaction, and is freely soluble in water; so that it does not occlude the pores of the skin, or cake and form crusts thereon, to cause endless irritation, and aggravate instead of ameliorate unhealthy conditions. While substances such as rice powder and starch do not adhere to the skin, “Vinolia” Powder does so satisfactorily. Moreover, by gently dusting it on the face, as after shaving, the most delicate transparent snowy film may be thrown over the skin to protect it from wind, sun, irritating gases, and dust, &c. It is antiseptic, quite innocuous, and may be used on weeping surfaces, on parts which chafe, and on the axillæ, feet, and hands. As a face powder, and for the nursery, it is all that could be desired, exhaling as it does a richly refreshing odour, in which is perceptible the sweet fragrance of the choicest attar of roses. It is suitable for a mouth-wash, for vaginal injections, and will be found most convenient to replace during the day the applications of “Vinolia” employed at night. It is not in itself curative any more than is “Vinolia”; but as the speediest course to recovery in skin ailments is often by the application of a protective, grateful emollient, the Medical Profession will discover in our exquisite products of pharmaceutical skill requisites that are well-nigh indispensable in good practice. Of such value are “Vinolia,” “Vinolia” Powder, and “Vinolia” Soap (Medical and Toilet).

👉 NOTICE OF INTRODUCTION. 👈

“VINOLIA” SHAVING SOAP.

A De-alkalised, De-hydrated, Superfatted, Bay-rum Soap.

The evils of ordinary soaps are doubly intensified when used for shaving, both as regards the action of the alkalies upon the face, and also of the essential oils employed for scenting. “VINOLIA” SOAP yields a staying substantial lather, free from alkalies, and is charged with Bay-rum, the desirable qualities of which have rendered it of such widespread usefulness.

While a harmless thick lather makes shaving a comfort and pleasure, an evanescent alkaline one causes smarting, and renders the face liable to become rough and blotchy. We have thus long deferred supplying Superfatted Shaving Soap, because we would not send one out unless we could honestly say it was SUPREME. This is the only proper Shaving Soap to use, and will not cause disappointment.

As the Medical Profession are already familiar with “VINOLIA” SOAP, we have not deemed it necessary to prepare samples of “VINOLIA” SHAVING SOAP.

Prices 2s. and 3s. 6d. per Stick.

Prices of “VINOLIA,” a Plastic Emollient Cream, 1s. 9d., 3s. 6d., and 6s. per Box; “VINOLIA” POWDER, 1s. 9d., 3s. 6d., and 6s. per Box; “VINOLIA” SOAP (Toilet), 2s. 6d. per Box of Three Tablets; “VINOLIA” SOAP (Medical), 2s. per Box of Three Tablets; “VINOLIA” SHAVING SOAP, 2s. and 3s. 6d. per stick; 20 per cent. discount to Medical Men.

Samples Post Free on request. Can be prescribed and obtained through all respectable Chemists.

BLONDEAU & CIE., London, Paris, and New York.

English Dépôt—Ryland Road, London, N.W.

The Chemists Aerated & Mineral Waters Association. Limited : London : Harrogate : Bristol :

THE CHEMIST'S TRUE FRIEND.

Established in 1878 to supply Chemists ONLY with the Highest Quality of Aerated Waters at the Lowest Co-operative Prices.

Received with doubt, it worked its way uphill to success, and now fills more Syphons than any Maker in the United Kingdom.

NUMBER OF MEMBERS, about 2,000.
SECURE A SHARE WITHOUT DELAY. (1)

Write—Secretary, 45 Gifford St., Caledonian Road, London, N., for Samples, Prices, &c.

CIGARS, ETC.

At the Lowest Wholesale Prices.

La Juana 10/6 per 100, Sold at 2d. each.
La Trafalgar 15/0 ,, ,, 3d. ,,
El Sol Habaners, } 22/ per 100, Sold at 4d. each.
Havannah 1885 Crop }
&c, &c. TOBACCO, CIGARETTES, &c.

Samples on receipt of 1s. 6d. in Stamps.

BEWLAY & CO., LTD.

Tobacco Manufacturers and Cigar Importers,

49 STRAND, and at 143 CHEAPSIDE, LONDON.

ESTABLISHED OVER 100 YEARS.

FOR FILTERS

Perfect in Mechanical and
Chemical Action, Reliable
Durable, Easily Cleaned.

LIPSCOMBE, OXFORD STREET, LONDON, W.

Makers to the Royal Family,

Original & sole inventor of the celebrated improved Filter

The ONLY GENUINE are made SOLELY by the Sons of the late Mr. Lipscombe. As there are watches and watches, so there are Filters and Filters, and the Trade are Cautioned against feeble Imitations of Lipscombe's Filters. To avoid grave disappointment, address—

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This Caution is necessary as we have no connection with any other Firm TRADING under the same name—Caveat Emptor,

HUGO BROWN & CO.

41 Ormond Street, LIVERPOOL,

SOLE AGENTS IN EUROPE FOR LIEBIG'S

EXTRACT OF BEEF

MADE BY

MESSRS. A. SANTA MARIA & CO.
PAYSANDU.

Sold as imported in cases of two tins each, weighing together about 112lbs.

AVOID RISK OF CHILLS IN THE BATH BY USING RANKIN'S CORK BATH MATS.

MAKES THE BEST CARRIAGE MAT. OF ALL CHEMISTS AND DRUGGISTS.
A Real Comfort. Recommended by Medical Men.

CAUTION.—These Mats are distinguishable from all others in being made of Solid Cork Wood, 1 inch thick, and are unequalled for warmth and comfort.

Valuable show-cards supplied to Retailers with first order, and with all Mats an equal number of fine thin cards of Cork printed with illustrated advertisement. These cards are a great novelty, and their free distribution will be found to assist sales materially.

PRICES,
3/-, 5/-, and 7/6 each,
free; extra sizes, 10/6,
12/6, and 15/- each,
super quality and finish.

WM. RANKIN & SONS, 10 CARLTON PLACE, GLASGOW.
Wholesale Chemists' Agents—S. MAW, SON & THOMPSON.



NEW ESS. LEMON

W. J. BUSH & CO.'S 'SPECIALITY.'

PHENOMENAL SUCCESS!!!

IT was our pleasure this time last year to inform our numerous friends, and the trade generally, that we had, after considerable difficulty, succeeded in opening a manufactory in Messina for the manufacture of Sicilian Essences. The reason of our taking so bold a stroke was due to our finding it practically impossible to obtain from any of the usual sources regular supplies of absolutely pure Essence of Lemon, made from the finest fruit.

By making the Essences ourselves on the spot, we were enabled last season to offer to the trade **a quality that had never been seen before in this or any other market!**

Notwithstanding the great opposition we had to encounter, combined with the somewhat libellous statements that were made by our competitors, both here and at Messina—caused through common jealousy—the trade has appreciated our efforts and our success in being able to offer them an Essence so superior in quality, that **never before have we sold so large a quantity.** Through this fact we are pleased to inform our friends that it has been necessary for us to take another manufactory in Villaggio Gazzi, Messina, which is no less than **three times the size of the one in Strada Antico Cimitero.**

We are now in a position to state that we have **the largest manufactory of Sicilian Essences;** which is situated in the centre of Orange and Lemon Groves, whence we have arranged to obtain our supplies of fruit. The quality of our Essence is exceptionally fine this year, and we are confident that when you see our samples you will agree with us, that they are by a **long way the finest to be obtained.**

With regard to the crop, we believe it will be a very fair average one, but as the price of Essence Lemon is so exceptionally low, there is no room for a further fall below that of last season; besides, the price of Lemon Juice is at an unprecedented low figure, which, of course, must maintain the price of the Essence. However, as the duration of the crop is from three to four months, no definite estimate of the total yield is yet possible.

One of our partners is now in Messina superintending the manufacture.

W. J. BUSH & CO.
ARTILLERY LANE, LONDON.



ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Extract of Beef, Extract of Malt, and sound Port Wine.

REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skilful and judicious manner in which the respective ingredients have been proportioned and combined, the Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).

December 15, 1888.

ROBINSON'S ORANGE WINE.

Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application. [2]

PHARMACEUTICAL SHERRY WINE.

This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in 1-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6, Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order.

B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.



THE TRIUMPH OF THE AGE

IS THE

"NIAGARA" BOTTLE,

Or Improved CODD'S.

Everyone admits it is the most perfect in the market.

Send for Sample and compare!

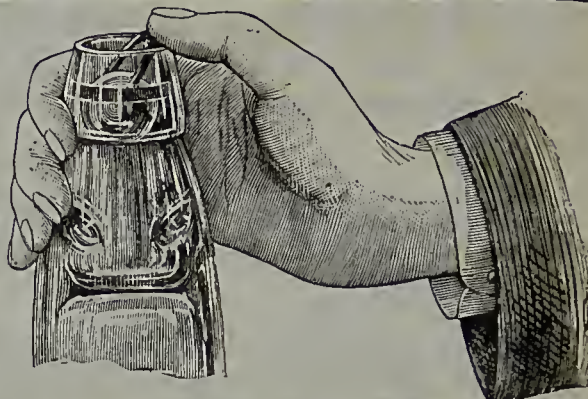
See the new Opener.

LOWEST PRICES ON APPLICATION.

Name on Bottles free for orders of 30 Gross. Under that quantity Moulds charged 10s. for each size or shape.

Extra Rings, 1s. 6d. per Gross, printed with name of owner 3d. per Gross extra (say if Patent Split Rings).

The first to introduce this Bottle and unique means of opening in his district must at once command a monopoly of the Trade, as our experience confirms us in the statement that WHEN ONCE TRIED, THE PUBLIC WILL HAVE NO OTHER.



OPENING WITH THE THUMB.

To open push the Opener from one side the Bottle neck to the other, when the ball immediately falls.

"The Attached Opener," ready for attaching to Bottles already in use, Price 3s. per Gross.

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BARNETT & FOSTER, "NIAGARA" WORKS, 26TH EAGLE WHARF ROAD, LONDON, N.

NATURAL ARSENIO-FERRIC MINERAL WATERS OF

LEVICO

DOSE—One Tablespoonful mixed with Seltzer or Red Wine three times a day.

Price per dozen Bottles, 12/- net; price per 100 Bottles, 88/- net. Delivered free on rail London.

They are particularly valuable in the treatment of Anæmia, Chlorosis, Syphilis, Skin Diseases, Menstrual Disorders, Scrofulous Diathesis, and most especially Nervous Affections of all kinds.

To be had of all Chemists and Druggists.

Agency, 24 Coleman St., London, E.C.

GOLD MEDAL, Amsterdam, 1883. DIPLOMA OF HONOUR, Paris, 1887.

GUÉRET FRÈRES,

MACHINISTS, PATENTEEES,

PARIS—72 BOULEVARD DE LA GARE, 72—PARIS.

SYPHONS WITH SHORT LEVER, with Metal Tops of Pure Tin, carefully mounted, and the glass of the *first quality*.

GAZOSELTZ, for the instantaneous production of Aërated Beverages at table. Anyone can use them.

"CONTINUOUS PROCESS" Apparatus complete, guaranteed without flaw in construction, possessing perfect action, and tested to a high pressure, while fulfilling every desirable condition of economy and sanitation.



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146 MINORIES, LONDON E.C.
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Sydney
&c.

SODA WATER MACHINERY

AND ALL ACCESSORIES
FOR THE TRADE

BRATBY & HINCHLIFFE LIM.

HEAD OFFICE
SANDFORD ST. ANCOATS, MANCHESTER.

BOXES. BOTTLES. MACHINERY,
ESSENCES
Catalogues, Circulars, Testimonials
Post Free

QUEEN
MARCH

SYPHONS & SELTZOGENES

GREAT REDUCTION IN PRICE.

We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.

WE CAN GIVE TO LARGE AND SMALL BUYERS EXCEPTIONALLY LOW PRICES.
PLEASE WRITE US AT ONCE FOR PRICES, STATING QUANTITY OF EACH KIND REQUIRED



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We have obtained at the above Exhibition

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A feat never accomplished before by any other house supplying requirements for the Aërated Water Trade.

These awards will carry with them **THREE GOLD MEDALS**, which were awarded as follows:—

- 1st—SODA-WATER MACHINERY (Highest Award possible).
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FOR TEA AT THE

PARIS EXHIBITION.



PRIZE MEDAL, PARIS, 1889.

To avoid imposition see that the trade marks (a Tower, with the word "Strength" across it, and "Tower Tea") are on every package, without which none is genuine.

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SANTHA.

A Digestive EXTRACT OF TEA, made instantly in Cup or Teapot.

The injurious action of tea upon the digestion is due to the tannin it contains; and as this dissolves instantly in hot water, no method of infusion can keep it out. Santha is the only form of tea that has no action upon either food or membranes; and it is not bilious like cocoa and coffee. The *Lancet* of May 4th, 1889, says:—"The aroma and the caffeine are preserved, and the tannin is neutralised and rendered innocuous." The *London Medical Recorder* of Feb. 20th, 1889, says:—"Santha possesses the aromatic and stimulating qualities of the crude leaf, minus its astringency. The *Illustrated Medical News* of August 31, 1889, says:—"We can recommend it as the most digestible and palatable form of tea yet submitted to us."

Santha is the only Tea suitable for Weak Digestions. Of Chemists, &c., 1s., 2s. 6d., and 6s.; or by post from works, 2d. extra.

SANTHA TEA COMPANY (LIMITED), Penarth Street, Hatcham, S.E.

Wholesale Agents—BARCLAY & SONS, Farringdon Street, E.C.

MILLAR'S BRITISH WINES.

ORANGE (suitable for Quinine), GINGER, RAISIN, COWSLIP, CHERRY, &c.

A. MILLAR & CO., Thomas Street, DUBLIN.

Sole Agents for London and District—H. J. ROYDANT & CO., 75 Acre Lane, Brixton, S.W.

DENAYER'S

LIQUID PEPTONES STERILIZED

Free from microbes!
Keep good for ever in all climates.
119 BISHOPSGATE STREET WITHIN, LONDON, E.C.

DENAYER'S PEPTONATE OF IRON. A bland, non-irritating and most easily assimilable ferruginous preparation. For debilitated constitutions, children, and aged people.

DENAYER'S PEPTONE OF MEAT. A powerful restorative for all ailments of the stomach, stimulates general nutrition. Is retained when the stomach rejects all other food. Pleasant to taste. Of all Chemists and Wholesale Houses.

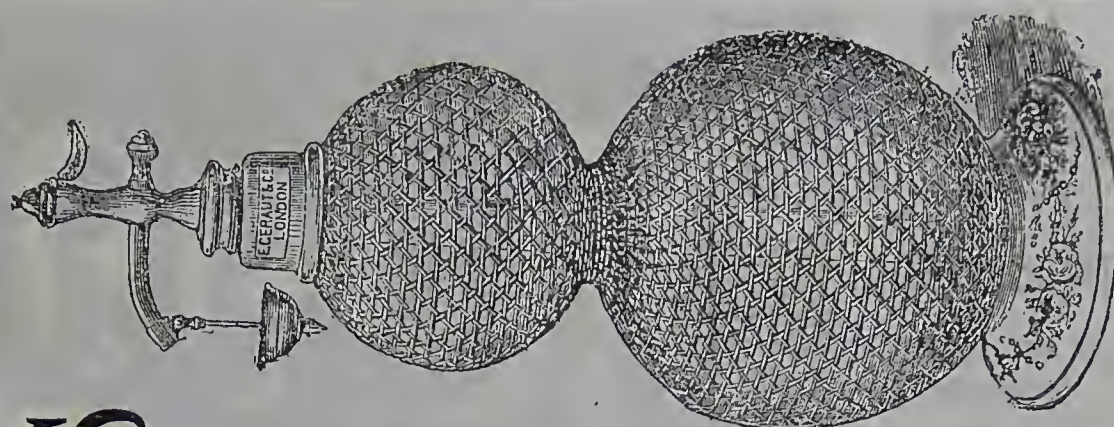
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SELTZOGENESPatentees & Largest
Wholesale Manufacturers.**3 PINT, WIRE & CANE.**5 " " "
8 " " "Tested at a pressure of 240 lbs.
per square inch, being double
that they are used at, and we
guarantee every machine on
leaving our firm to be made
with pure **ENGLISH BLOCK**
TIN, and are made on the
Premises.PRICES AND ILLUSTRATED CATALOGUES, WITH FULL
PARTICULARS, SENT FREE ON
APPLICATION.**TO ESSENCE MAKERS
ORANGE AND LEMON PEELS
(DRIED and FRESH).**This Season's Peel is now ready, and we are prepared to supply Fresh
Orange and Lemon Peels specially cut (free from pith), in small shreds
about $1\frac{1}{2} \times \frac{1}{8}$ ", in a condition most favourable for the manufacture of
Essences and the Official Tinctures.

Samples will be sent free on application.

"EXCELSIOR" TABLE JELLIES

IN CARDBOARD BOXES,

Of $\frac{1}{2}$ -Pint, Pint, and Quart Size, packed in Wood Boxes free. $\frac{1}{2}$ -Pints, 1/9 per doz.: Pints, 3/3 per doz.: Quarts, 6/ per doz.

FLAVOURS:

Orange, Lemon, Calves' Feet, Vanilla, Raspberry, Noyeau,
Cherry, Strawberry, Pineapple, and Black Currant.**CHAS. SOUTHWELL & CO.**
DOCKHEAD, LONDON, S.E.**A WONDERFUL SUCCESS!!****NON-INTOXICATING BEER**

Made from MASON'S Original

EXTRACT of HERBS

(REGISTERED.)

Composed of Yarrow, Dandelion, Comfrey, & Horehound.
ENLARGEMENT OF SIZE.A Sixpenny Bottle makes EIGHT GALLONS of
HERB OR BOTANIC BEER

A NON-INTOXICATING BEVERAGE

Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most
perfect substitute for Alcoholic Drinks ever discovered, for either
Summer or Winter.**BEWARE** of mean and fraudulent imitations.**BEWARE** of others copying our title.**MASON'S** is the original and only genuine.**MASON'S** is a Special Compound entirely from Herbs.

NO OTHER EXTRACT MAKES BEER LIKE IT.

Sold in Bottles at 6d., 1/, & 2/ each, with directions.

MASON'S WINE ESSENCES

Make Temperance Wines in a few minutes.

Ginger, Orange, Lemon, Raspberry, Black Currant, &c.

These are having a very large sale now, and are extensively advertised.

Sold in Bottles at 6d., 1s., and 2s. each.

Quotations on application.

SOLE INVENTORS &
MANUFACTURERS:**NEWBALL & MASON,**
Manufacturing Chemists and Botanic Druggists, NOTTINGHAM

**LIFE'S
RESTORER.**

**FINEST
CONSOMMÉ.**

**HIGHEST POSSIBLE
HONOURS.**

PARIS EXHIBITION, 1889
FOOD
AND COOKERY EXHIBITION,
LONDON, 1889;
&c., &c., &c., &c., &c.



LIQUID EXTRACT OF BEST FRESH BEEF.

A happy thought does not alone constitute a perfect invention; simplicity is needed to make it perfect.

"MAGGI" possesses this quality in a degree that renders it as indispensable in the kitchen as salt and pepper.

"MAGGI" is simply liquid EXTRACT OF BEEF, a teaspoonful of which, added to a cup of hot or cold water, makes at once a perfect BEEF TEA, which anyone, sick or well, will relish.

Two tablespoonfuls to a quart of water (adding Vegetables, &c.) will make a better Soup or Potage than hours spent over the fire.

The improvement in the quality of Gravies, Ragoûts, Stews, Hashes, Roasts, &c., by the addition of a few drops of "MAGGI," is amazing.

Unlike all other Extracts of Meat, "MAGGI" is most delicious, does not need the addition of salt and pepper, can be used by the most inexperienced, produces as good a Consommé or perfect Clear Soup as any first-class cook can prepare by the most elaborate and expensive means, and keeps good in any climate.

Soup Stock is now rendered unnecessary, as "MAGGI" is better, cheaper, and more nutritious for the sick, convalescent, and healthy.

In 2-oz., 1-lb., & 2-lb. Bottles, of all Grocers and Druggists throughout the world.

Wholesale Agents—E. Lazenby & Son; Samuel Hanson, Son & Barter; W. & D. Harvest; Crosse & Blackwell.

**"LA JOYA"
CIGARS.**

See C. & D. Diary, p. 104.

This First-class Brand of English Cigars

IS MANUFACTURED SOLELY BY

M. & R. PEACOCK,
542 KINGSLAND ROAD, N.E.

Sample box of 25 Post Free for 5s.
Postal Order.

WHOLESALE PRICE LIST TO LICENSED
DEALERS ON APPLICATION.

"MYRTLE GROVE" TOBACCO

In 1-oz., 2-oz., and 4-oz. Packets, and $\frac{1}{4}$, $\frac{1}{2}$, 1 lb. Tins only.



TADDY & CO., 45 Minories, LONDON

ESTABLISHED 150 YEARS,

SNUFF, TOBACCO, AND SEGAR MANUFACTURERS.



Write for List of Specialities.



PEDESTAL.

TYRER'S

1d. sizes



BOTTLE.

MENTHOL

6s. gross



VASE.



FIG. A.

INFLUENZA

CURED BY

MENTHOL.

Dr. LENNOX BROWNE says:—"It kills the microbe of infection."—*Vide* MEDICAL PRESS AND CIRCULAR, January 8, 1890.

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Crouche, F. B. (Wafers)
Da Silva and Co.
Edwards and Son
Evans, Leschr and Webb
Fenning's (Powders)
Goodall, Backhouse and Co.
Grosgrin, C.
Holloway (Pills and Oint.)
Invigorine Manufacturing Co.
John's Liver Pills
Kemp, W. H.
Lalor (Phosphodyne, &c.)
Lincoln (Clarke's Mil.)
May, Roberts and Co.
Newbery and Sons.
Roberts and Co. (Forelan)
Rosene Manufacturing Co.
Sequah (Limited)
Smith, Sam
Swift's Specific Co.
Wilson, A. (Bunter's Nerve)

PERFUMERY,**FANCY SOAPS**

Blondeau and Co.
Burroughs, Wellcome and Co.
Chesebrough Manufacturing Co.
Chiswick Soap Co.
Cook, E., & Co.
Coward and Co.
Dee Oil Co. (Limited)
Durrant, Geo.
Evans, Sons & Co. (Foesoline)
Ewen (Soaps)
Farina, J. M.
Giraud Fils
Greenhill, T. S., and Son
Mann, O. A., and Co.
Maw, Son and Thompson
Mouilla Liquid Soap Co., Lim.
Newbery and Sons (Rerdoes)
Osborne, Bauer & Chesebourn
Pears' Soap
Price's Patent Candle Co.
Rosene Manufacturing Co.
Rouse & Co.
Sainsbury, S. (Lav. Water)
Shirley, A. W.
Steelman, J.
Taylor, J. N.
Thompson, Walters, Hole and Co. (Limited)
Treat, R. C.
Truett, H. P. (Limited)
Vigils, L.
Violet
Vogt, G., and Co.
Warwick Brothers
Wedlake, M.
West, T. (Okell's Mons)
Woolley, Sons & Co. (Powder)

PETROLEUM

Anglo-American Oil Co. (Lim.)
Dee Oil Co. (Limited) (Jelly)

PEPPERMINT OIL

Cooking and Co.

PEROX. OF HYDR

Dunn and Co.
Robbins and Co.

PHOTOGRAPHIC

American Camera Co.
Botwright and Grev
Howards and Son (Chemicals)
May and Baker
Orme, J., and Co.
Perken, Son and Rayment
White, Alfred, and Sons

PHARM. PREPS.

Allen and Hanburys
Baelz, R., and Co.
Barron, Squire and Co.
Billant
Brady and Martin
Burgoyne, Burbridge & Co.
Burroughs, Wellcome & Co.
Chanteland, G.
Chassaigne and Co.
Claudian, G.
Dee Oil Co. (Limited)
Duncan, Flockhart and Co.
Fellows
Ferris and Co.
Fletcher (Liqs. for Syrups)
Fruman, E.
Giles Schacht & Co.
Greiff, E. W., and Co.
Hearon, Squire and Francis
Hewlett and Son
Hill, A. S., and Son
Hooper, B., and Co.
Howards and Sons
Keith & Co. (Conc. Tinctures)
Lorenz, H.
May and Baker (Phenacetine)
Rankin and Borland
Ricqles and Co.
Roberts and Co.
Soden Mineral Produce Co. Ltd.
Symes and Co.
Tucker, J., and Co.
White, Alfred, and Sons
Willows, Francis and Butler
Woolley, Sons and Co.
Wyleys and Co.

PINE PRODUCTS

Burroughs, Wellcome and Co.
Stern, G. and G.

PILL MACHINES

Pindar, J. W.
Robertson, J., & Co. (Coating)
Toogood, W. (Coater)

PILLS (Coated, &c.)

Allen and Hanbury
Anderson Apothecaries Hall
Beecham, Thomas
Eade's Gout Pills
Evans, Sons and Co.
Frere, L.
Galloways
McKesson and Robbins
Newbery and Sons
Richards, J. M.
Towler, E. T.
Warner, W. R. & Co. (Coated)
Wyleys and Co.

PLASTERS

Cooper and Co.
Evans, Sons and Co.
Johnson and Johnson
Mather, W.
Quilliam, J., and Co.
St. Dalmas, A. De
Seabury and Johnson
Thompson, M. P.
Young, H.

PODOPHYLLIN, &c.

Keith, B., and Co.
Smith, T. and H., and Co.

POLISHING

Bradley & Bourdas (Albatum)
Fordham, W. B., and Sons
(Limited)
Oakley, John, and Sons
Griffiths, T. M.

PORCELAIN GOODS

Toogood, (E.C. Pots, regist.)

PRINTING

Bowers Bros.
Cyclostyle Co.
Ford, Shapland and Co.
Silverlock, H.
Townsend, J.
Zucato and Woolf.

PUMILINE

Stern, G. and G.

QUININE SALTS

Andreas, Oscar, and Co.
Boehringer, C. F., and Sohne
Howards and Sons
Kuhn, B.
Rivers, Hicks (Penny Quinine)
Zimmermann and Co.

RENNET

Duncan, Flockhart and Co.
Johnson and Jürgensen
Oldfield, Pattinson and Co.

RESPIRATORS

Schutze, F., and Co.

SACCHARIN

Allen and Hanbury
Burroughs, Wellcome and Co.

SALICIN

Macfarlan and Co.
Smith, T. and H., and Co.

SALICYLIC ACID

Fuerst Bros. (Kolbe's)

SALOL

Kuhn, B.

SELTZOGENES

Bratby and Hinchliffe, (Ld.)
Duralfort
Evans, Sons and Co.
Geraut, E. and Co.
Idris and Co.
May, Roberts and Co.

SAUCES, PICKLES

Goodall, Backhouse and Co.
Tyrer, P.

SCHOOLS, &c.

Central School of Chemistry
and Pharmacy
City School of Chemistry and
Pharmacy (Lim.)
Liverpool School of Pharmacy
London Homoeopathic and
Medical School
Manchester College
South London School of
Pharmacy, Lim.
The School of Pharmacy
Westminster College

SOAP

Blondeau and Co. (Vinolia)
Chiswick Soap Co.
Cook, E., and Co.
Fordham, W. B., and Sons
Pears' Soap
Stern, G. and G.

SHEEP DIP

Fletcher, Bros. and Co.

SHOP FITTERS

Bowling and Govier
Bygrave, J. and W.
Corran, J. R.
Evans, Sons and Co.
Hawke and Son
Howlett, S.
Natali, E. (Show Cases)
Poths, H., and Co.
Treble, G., and Co.
Treble, G., and Son
Yates, W. S.

SPONGE

Cresswell Bros.
Evans, Sons and Co.
Peterson, M., and Co.

SPECTACLES

Botwright and Grey
Darton, F., and Co.
Perken, Son and Rayment

SPIRIT

Burrough (Pure and Methyl.)
Harvey, J. W., and Co.
Jones and Co. (Methyl.)
Macnair, A., and Co.
Macnair, J. and D., and Co.
Phillips and Co.
Smith, Stephen and Co.

STAMPS (RUBBER)

Hickisson, J.
Pollard, A. W.

STOPPERS

Austin and Co. (Sprinklers)
Barnett and Foster
Sanders, H. G., and Son

STOVES

Clark, S. and Co.

SURGICAL

Ayrton and Saunders
Bailey, W. H., and Son
Barclay and Sons (Limited)
Cooking, J. T.
De Luci, G. V.
Eschmann Bros. and Walsh
Haywood, J. H.
Ingram and Son
Liverpool Patent Lint Co.
Maw, Son and Thompson
Meastivier and Co.
Robinson and Sons
Schutze, F., and Co.
Schoenfeld Frères
Thompson, Walters, Hole and
Co. (Limited)
Wood, Vincent
Woolley, Sons and Co.

STARCH

Critchley (Gloss)

SUGAR

Gibson, R., and Sons

SULFONAL

Burroughs, Wellcome and Co.
May and Baker

SYPHONS

Barnett and Foster
Bratby and Hinchliffe (Ld.)
Duralfort
Favarger and Co.
Geraut, E., and Co.
Kilmer Bros.
Prudon and Dubost

SYRINGES

De Luci, G. V.
Schoenfeld Frères

SYRUPS

Fletcher, Fletcher (Liquors)
Idris and Co.

TILL

Stokes, G. R. & Co.

TEA

French and Langdale
Gt. Tower St. Tea Co.
Santha Tea
Walker and Dalrymple

TOBAC—CIGARETTES

Bewlay and Co.
Feacock, M. & R.
Taddy and Co.

THERMOMETERS

Bailey, W. H., and Son
Berry, F. H.
Darton, F., and Co.
Evans, Sons and Co.
Perken Son and Rayment

TOILET

Evans, Sons and Co.
Fordham, W. B., and Sons
Hopgood and Co.
Mumford, G. S.
Quelech, H. C.
Simon, J.
Truefitt, H. P. (Limited)

TOOTH PASTE

Jewsbury and Brown
Sutton, O., and Co. (Block)
Wilson, A. (Bunter's)
Woods, M. (Areca)

TRADE MARKS

Dukes, B.
Horn and Son

TRUSSES

Ayrton and Saunders
Bailey, W. H., and Son
Haywood, J. H.
Wood, V.

TYPE-WRITING

Pollard, A. W.
Richards, J. M.

URETHANE

Howards and Sons

VACCINATION

Vaccine Association (Lymph)

VALUERS AND**TRANSFER AGENTS**

Berdoo & Co.
Brett, F. J.
Crocker, G. B.
Orridge and Co.
Battle, J. R.
Sanford and Son
Stelner and Co.

VASELINE

Chesebrough Manufacturing Co.

VETERINARY

Higg, T.
Braggi, P., and Co.
Day and Sons
Day, Son and Hewitt
Elliman, Sons and Co.
James, W. H. (Blister)
Merr de Chantilly, P.
Hookledge, J.
Spratts (Dogs)
Sutton, P., and Co.
Walker, Froke and Co.
Wyleys and Co.

VINOLIA

(Superfatted Medi-
cal and Toilet)
Blondeau and Co.

WHOLESALE AND**EXPORT DRUGS**

Allen and Hanbury
Barron, Harveys and Co.
Brothers, J. and Co.
Burgoyne, Burbridge and Co.
Bush, W., Son and Co.
Clay, Dod and Co.
Coward, G. E., and Co.
Davy, Humphrey, and Co.
Evans, Sons and Co.
Evans, Leacher and Webb
Evans and Sons (Limited)
Faulding, F. H., and Co.
Ferris and Co.
Fox, W., and Sons
Goodall, Backhouse and Co.
Harker, Stagg and Morgan
Hearon, Squire and Francis
Hewlett and Son
Hill, A. S., and Son
Hodgkinsons, Treacher and
Clarke
Lofthouse and Saltmer
Macfarlan, J. F., and Co.
Oldfield, Pattinson and Co.
Potter & Clarke (America)
Sumner, R., and Co.
Symes and Co.
Thompson and Capper
Thompson, Walters, Hole and
Co. (Limited)
Walker, Froke and Co.
Willows, Francis, and Butler
Woolley, Jas., Sons and Co.
Wright, Layman and Umney
Wyleys and Co.

WINE, SPIRITS

Coleman and Co. (Meatard
Durrant, G. (Orange) Malt.
Goodall, Backhouse and Co.
Harvey, J. and W., and Co.
Idris & Co.
Jones and Co.
Miller, A., and Co.
Phillips, G., and Co.
Robinson, B.
Smith, S., and Co. (S.V.B.)

BERDOE'S TRIPLE FRENCH PERFUMES



THESE PERFUMES have been known to the trade for many years past, and their steadily increasing sale is the best proof of the appreciation in which they are held. Notwithstanding that the prices of some brands of perfumes have been reduced, F. NEWBERRY & SONS find it both impossible and needless to offer any other advantages to buyers than—(1) the excellent quality of the Perfumes themselves, (2) their price. The object kept in view is not to produce goods which may be sold at a given price and leave a given margin of profit, but to produce such as shall equal or surpass a given standard of quality.

BERDOE'S TRIPLE

PLAIN STOCK BOTTLES of 20 oz., 10 oz., and 5 oz.		£ s. d.
Ess. Bouquet	per 20 oz.,	0 8 7
Frangipane	per 10 oz.,	0 4 4
Jasmin	per 5 oz.,	0 2 3
Jockey Club		
Millefleurs		
New Mown Hay		
Opoponax		
Patchouli		
Rondeletia		
Stephanotis		
Ylang Ylang		

**FRENCH ESSENCES.**

		£ s. d.
Violets	per 20 oz.,	0 11 3
White Rose, 20 oz., 9s. 10d.; 10 oz., 5s. 1d.; 5 oz., 2s. 7d.		
Eau de Cologne	per 20 oz.,	0 4 4
Lavender Water	" 10 "	0 2 3
	" 5 "	0 1 2

Berdoo's Perfumes, in Handsome Show Bottles for the Counter, Rose Cut Stoppers, Vitrified Opal Shield Labels with Gold Border and Black Letters, from 11s. 6d. each.

Established A.D. 1746.

The above are the leading Essences, and to these the special attention of customers is asked. Those who desire greater variety will find in "Newberry's Catalogue" a more extended list.

F NEWBERRY & SONS,

1 & 3 KING EDWARD STREET, LONDON, E.C.

H. GILBERTSON & SONS.

Proprietors—R. D. DIXON, JOHN DOWELL, A. B. V. TAFES.

DRUGGISTS' SUNDRIESMEN.

GILBERTSON'S REGISTERED DISPENSING BOTTLE.

Rd. No. 118583.



PRICES.

1	1½	2	3	4	6	8	10	12	16	20 oz.
10/6	10/6	10/6	11/6	11/6	13/0	13/0	20/6	20/6	23/6	30/0 Green, per grs.
10/9	10/9	11/6	12/6	13/0	15/6	15/6	24/0	24/0	27/0	34/6 White, „

IN CRATES (about 6 Gross Assorted).

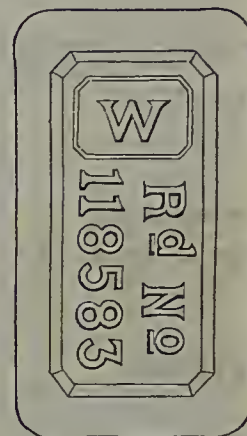
Not less than 1 gross of a size.

1	1½	2	3	4	6	8	10	12	16	20 oz.
9/9	9/9	9/9	11/0	11/0	12/0	12/0	19/6	19/6	22/0	28/0 Green, per grs.
10/3	10/3	11/0	12/0	12/6	14/9	14/9	23/0	23/0	26/0	33/6 White, „

CRATES AND CARRIAGE FREE.

Casks for EXPORT are charged, but delivered F.O.B.

NAME PLATES EXTRA, AT USUAL RATES.



FACSIMILE OF
BOTTOM OF BOTTLE.

This Bottle is made with rounded corners without altering its flat surfaces, which not only adds to its appearance but reduces breakage to a minimum, *ensuring accurate capacity, simplifying labelling*, and producing a perfect appearance when wrapped.

ANY OF THE ABOVE BOTTLES ARE SUPPLIED WITH FLAT, GLOBE, OR CUT GLOBE STOPPERS.

GILBERTSON'S Bottle Eye Bath, 8/ dozen. (See Editorial Note in last issue of THE CHEMIST AND DRUGGIST, page 109.)

GILBERTSON'S Cherry Tooth Paste, 3/9 and 7/ dozen.

GILBERTSON'S Court Plaister and Gold Beaters' Skin, all sizes.

GILBERTSON'S Graduated Feeding Bottles, 3/9, 7/6, 12/ dozen.

GILBERTSON'S Registered Flat Feeding Bottles, complete, 8/ & 10/ doz.

GILBERTSON'S Cocaine Sprays, nickel mounts, 36/ & 42/ dozen.

GILBERTSON'S Tooth, Nail, Shaving, and Hair Brushes.

GILBERTSON'S Cut Smelling Bottles in great variety.

GILBERTSON'S Enemas, "Special" 36/ dozen, "Long Canula" 54/ doz.

GILBERTSON'S "Perfect" Inhalers, 18/ dozen.

GILBERTSON'S Stoppered Bottles in boxwood cases.

DEPOT FOR ROURE-BERTRAND FILS' PERFUMES IN 1-LB. BOTTLES.

PRICES SUBJECT TO THE FLUCTUATIONS OF THE MARKET

SPECIAL QUOTATIONS TO SHIPPERS AND THE WHOLESALE TRADE.

11 ST. ANDREW'S STREET, HOLBORN CIRCUS, LONDON.

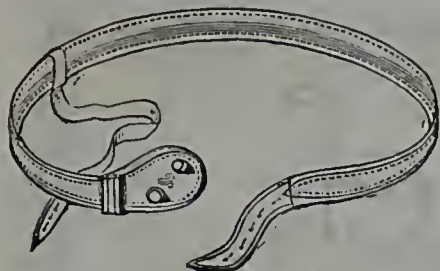


FIG. 1.—Single Circular Truss.



FIG. 5.—Salmon & Ody's Single Truss.

TRUSSES.

For INGUINAL HERNIA, covered
Basil and Moleskin.

	Single.	Double.
Figs. 1 and 2.. .. per doz.	12/6	21/6
Salmon & Ody's Principle, covered Basil and Moleskin, Fig. 5 (made to order)	23/0	45/0
Salmon & Ody's Principle, covered Basil and Moleskin (Circular)	22/0	36/0
For SCROTAL HERNIA, covered Basil, Fig. 6	36/0	60/0

(For all other kinds see Catalogue.)

These Prices are subject to the following
Discounts:—

5 per cent. on Orders of less than 1 gross.
10 " " " 1 gross and upwards.
12½ " " " 2 " "

All Trusses manufactured by us are of the Best Quality,
and we invite trial orders.

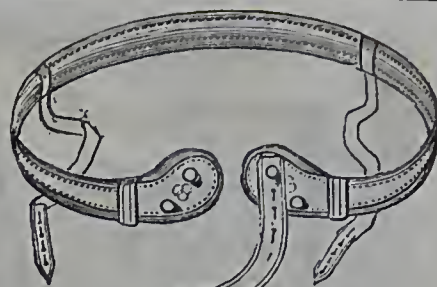


FIG. 2.—Double Circular Truss.

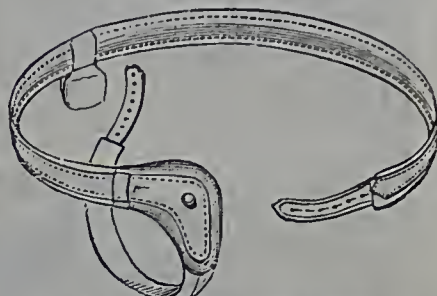


FIG. 6.—Truss for Scrotal Hernia.

FEEDING BOTTLES.

THOMPSON, WALTERS,
HOLE & CO.'s

'STANDARD'

CHEAPEST AND MOST SALEABLE IN
THE MARKET.



The "Standard." Screw Glass Stopper.



The "Standard." Box Top Cork.

	Per Gross.		Per Gross.
644 Green glass, box top corks, white fittings, loose	23/-	650 White glass, screw glass stoppers, white fittings, loose	39/-
645 Green glass, box top corks, black fittings, loose	26/-	651 White glass, screw glass stoppers, black fittings, loose	42/-
646 White glass, box top corks, white fittings, loose	27/-	652 White glass, screw glass stoppers, best quality, white fittings, each in handsome labelled cardboard box, with tube and bottle brushes	69/-
647 White glass, box top corks, black fittings, loose	30/-	653A White glass, screw glass stoppers, black fittings, each in handsome labelled cardboard box, with tube and bottle brushes	66/-
648 Green glass, screw glass stoppers, white fittings, loose	33/-		
649 Green glass, screw glass stoppers, black fittings, loose	36/-		

All the above prices are subject to 5 per cent. discount.

For Orders of two gross and upwards, customers can have own name on "Standard" Bottles, together with any other wording they may wish, FREE OF EXTRA COST.

SPECIAL QUOTATIONS FOR LARGE QUANTITIES.

THOMPSON, WALTERS, HOLE & CO., LD.

CURTAIN ROAD. LONDON.

Telegraphic Address—"BEATROP LONDON."

“For this relief,
much thanks.”



Anything that gives
RELIEF FROM PAIN
must needs be
A GREAT BLESSING
★ ★ ★
ST. JACOBS OIL
does even more; it
CONQUERS PAIN

We have now in stock, ready for delivery, a large assortment of Show Cards, Picture Cards, Transparencies, &c., of original designs. We have also between thirty and forty different designs of Illustrated Counter Wrappers, in sizes best suited to the general retail trade. Our Illustrations are wholly original, by our own Special Artists, and are Copyrighted. These Wrappers are printed on one side only, with wide margins; the paper is clear white, heavy and strong, and will be found most useful.

We shall have much pleasure in sending, carriage paid, assorted parcels of the above, to any dealer who will undertake to use same to our mutual advantage.

Our friends who have contracts with Sutton or other London carriers will kindly mention that fact when favouring us with their instructions. Foreign buyers will please name London Houses for enclosure.

PRICE LIST.

6 Dozen, 21/6. Cash with order.

Special Price List for St. Jacobs Oil in Bond (London and Liverpool) for Export.

p.p. THE CHARLES A. VOGELER CO.
WILLIAM E. GEDDES, Manager,
45 FARRINGTON ROAD, LONDON, E.C.
Paris House, Avenue Kleber, 72, PARIS, FRANCE.

The Throat and Voice.

LONDON.]

FEBRUARY 1

[1890.

CHLORATE OF POTASH TABLOIDS.

FOR AFFECTIONS OF THE VOICE, THROAT AND RESPIRATORY SURFACES GENERALLY.

By using the Tabloids the drug is effectually brought in contact with the oral mucous surfaces as a continuous gargle, and its specific action made certain. In acute sore throat Chlorate of Potash "usually relieves the uneasiness in a few hours" (Cohen). "It is used in ulcerated mouth and follicular pharyngitis, and has been employed in croup, diphtheria, and spasm of the larynx" (Brunton).

"Of convenient size, they are beautifully made; and, as they dissolve slowly in the mouth, are well suited for throat affections."—The LANCET.

Supplied to the Trade in beautifully graven white metal boxes, blue silk label, at 4s. and 8s. 6d. per dozen. Retail prices, 6d. and 1s. each.

CHLORATE OF POTASH & BORAX TABLOIDS.

The Tabloids afford an agreeable form in which to administer Chlorate of Potash and Borax.

Supplied to the Trade in beautifully graven white metal boxes, with pink silk labels, at 4s. and 8s. 6d. per doz. Retail prices, 6d. and 1s. each.

CHLORIDE OF AMMONIUM TABLOIDS.

The solvent and disintegrant as well as antiphlogistic powers of Chloride of Ammonium are well known, and have led to its extensive employment in cases of sore throat and bronchitis, attended with abundant secretion of thick and tough mucus or phlegm. The Tabloids slowly dissolving secure direct and continuous contact with the inflamed surface. They quickly mitigate irritation, and lessen expectation.

Two or three of the Tabloids will sometimes entirely relieve coughs that have long resisted treatment with ordinary remedies.

Supplied to the Trade in bottles, at 4s. 6d. and 12s. 6d. per doz. Retail prices, 6d. and 1s. 6d. each.

VOICE TABLOIDS.

Composed of COCAINE, Chlorate of Potash and Borax.

Impart a clear and silvery tone to the voice. Easily retained in the mouth while singing or speaking. Now used by the leading singers and public speakers throughout the world.



DIRECTIONS. — A single Tabloid may be slowly dissolved in the mouth to remove huskiness or hoarseness.

Supplied to the Trade in beautifully graven white metal boxes, with blue silk labels, at 8s. and 16s. per dozen. Retail prices, 1s. and 2s. per box.

SAL PRUNELLA TABLOIDS.

(NITRATE OF POTASH.)

"A popular remedy, sometimes successful in mild cases of incipient inflammatory sore throat, is a small piece of nitre allowed to dissolve slowly in the mouth" (Waring).

DIRECTIONS.—One or more (5 gr.) Tabloids should be dissolved slowly in the mouth for the local effect.

Supplied to the Trade in hottles of 100, at 14s. per doz. Retail price, 1s. 6d. each.

HAZELINE.

This drug is highly commended by the British Medical Association's Committee on Therapeutics. Hazeline, being prepared from the fresh green twigs, contains all the valuable volatile principles of the plant Witch Hazel, and is much more uniform and reliable in its action than are the tinctures, fluid extracts, &c., prepared from the dried bark.

DIRECTIONS:—In catarrh or cold in the head may be sniffed up the nostrils with an equal part of tepid water.

Dose for irritated or inflamed throat and lungs, half to one teaspoonful occasionally.

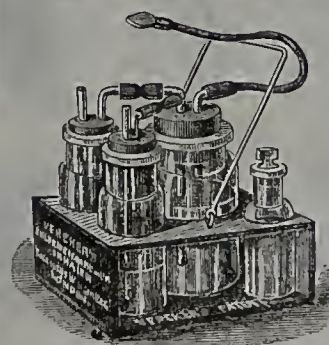
Supplied to the Trade in $\frac{1}{4}$ and 1 lb. hottles, at 14s. and 42s. per doz. Retail prices, 1s. 6d. and 4s. 6d. each.



The Witch Hazel Plant.

VEREKER'S CHLORIDE OF AMMONIUM INHALER.

"The neutral vapour of Chloride of Ammonium removes unhealthy and offensive secretions, and restores the long diseased or weakened nasal and respiratory mucous membrane to a healthy state, so that in cases of catarrh, where thickening, induration, and irritation exist, a most decided improvement is brought about in a short time." In "throat-cough," pharyngeal irritation, and relaxation and weakness



of the throat, it acts as a most effective alterative and tonic to the mucous membrane.

Dr. FRANKS, Dublin University, says:—"It is the best I have ever used, and I think I have tried all."

Dr. SMYLY, Ex-Pres. Royal College of Surgeons, Ireland, says:—"It is the best Inhaler for Chloride of Ammonium I have met with."

Supplied to the Trade at 5s. each. Retail 7s. 6d. each.

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.
Above Prices subject to usual Discount.

TRINITRINE (Nitroglycerine).

Trinitrine.—"Trinitrine is the new name for nitroglycerine, the general adoption of which has been advocated by Dujardin-Beaumetz, Huchard, and other Continental observers.—Its occurrence in prescriptions is less likely to alarm the susceptibilities of delicate, nervous, or highly-strung patients than the more commonly employed term. The Tabloids of Compressed Trinitrine are made with sugar of milk, which is admirably adapted for the purpose, and dissolves much more rapidly than any of the ordinarily employed excipients. We have made trial of these new tabloids, and find that they answer admirably in cases of angina-pectoris giving prompt relief to the paroxysms of pain. The Compound Trinitrine Tabloids, containing, in addition to nitroglycerine, nitrite of amyl, menthol, and capsicum, constitute a valuable preparation, and will, in all probability, speedily replace the official formula."—*Lancet*, April 24, 1886.

In full doses Trinitrine accelerates the heart's action, dilates the arterioles, flushes the face, and produces headache. Too large a dose may cause languor, nausea, pain in the stomach, and occasionally even temporary unconsciousness.



TABLOIDS.

		To the Trade.		
		Gr.	In bot.	Retail Doz.
Trinitrine (Nitroglycerine) ..	1/100	25 ..	1/	7/
" "	1/100	100 ..	2/	18/
" "	1/50	25 ..	1/	7/
" "	1/50	100 ..	2/	18/
Trinitrine and Amyl Nitrite	—	25 ..	1/6	12/
" "	—	100 ..	4/	36/
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POST-CARD COMPETITIONS, 1890.

THE PILL-MILL.

DURING the past month our subscribers have been indulging in the interesting and intellectual feat of putting the skeleton of a scientific lecture on a post-card. We now propose something in the nature of relief. The inhabitants of the United Kingdom are very fond of pills. The annual consumption must be enormous, but *how* enormous we have no means of knowing, unless our readers assist us in the inquiry. We therefore ask competitors this month to give us an estimate of the actual average number of pills supplied to the public every day in the British Isles. We ask competitors to base their calculations on facts within their range of knowledge. They can, for example, reckon from a week's trade how many of their own stock pills they sell daily, how many factory-made pills they have sold, how many they dispense, and about how many are contained in the patent medicines they supply. Finding thus their own daily average, they may roughly multiply this by 10,000 for the quantity sent out by chemists, and this total must be further very largely developed by adding what they think medical men, grocers, and others send out. We

only want for competition the one total figure in numerals. This must be stated exactly, not in dozens or grosses or thousands. We shall add all these figures together, and give the usual guinea prize to the competitor who gets nearest to the average.

Subscribers and their employes only are eligible to compete. No card will be admitted which reaches us after February 28, and no person may send in more than one card.

We shall be obliged to any competitor who will on his card, besides the figure, give us information or data which will assist us in forming a general estimate.

Practical Notes and Formula.

HONEY AND ALMOND CREAM.

THERE is a popular lotion for the "face, hands, skin, and complexion," which goes by this name, and is put up by a chemist in Portland, Me. According to a correspondent of the *Registered Pharmacist* an analysis of it was made by George H. Rose, of the Mass. College of Pharmacy. Mr. Rose concluded that it is an emulsion of cold cream, and gives, as a result of his work, the following formula:—

	Parts
1. Ungt. aq. rosæ	5
2. Ol. amygd. dulc.	5
3. Glycerin	5
4. Ac. borle	1
5. Liq. sodæ, U.S.P.	12
6. Mucil. cydon. (3ij.-Oj.)	25
7. Aquæ ad	200

Heat 1, 2, and 5 together, stirring constantly till an emulsion is formed; then warm together 3, 4, 6, and about 150 parts of 7, after which mix with cold cream emulsion, stir till cold, and make up to 200 parts with 7. Perfume with almond and rose.

SPICED VINEGARS.

THE following are given by the *Mineral Water Trades Review*:—

For Gherkins.

Good malt vinegar	1 gallon
Black peppercorns	6 oz.
Sliced ginger	4 "
Chillies	1 "
Garlic, in slices	1 "

Boil the spices and garlic gently in half the vinegar for half an hour, strain through a sieve, and add the rest of the vinegar to the spices and again strain. To the remnant spices add 2 oz. of salt and 1 pint of water, and boil for half an hour. After removing from the fire add 1 pint of vinegar, and again strain into the spiced vinegar, which when perfectly cold may be poured over the gherkins.

For Walnuts.

(To be used hot.)

Good malt vinegar	2 gallons
Black peppercorns	½ lb.
Ginger, unbleached	6 oz.
Mustard seed	1 lb.
Cloves	2 oz.
Mace	1 "
Garlic, in slices	2 "

In 1 gallon of vinegar boil the whole of the spices, and having strained, pour the hot liquor over the walnuts, then boil the remaining gallon of vinegar and pour over spices, &c. This pickle takes some time to mature, but if properly prepared should be ready for use in three months.

For French Beans.

Distilled or very pale malt vinegar	1 gallon
White peppercorns	4 oz.
Bleached ginger (sliced)	2 "
Chillies	1 "

Into ½ gallon of the vinegar place the whole of the spices and allow to macerate for twelve hours, then simmer (do not boil) gently, for one hour in an enamelled pan, covering the top. To be used hot.

Metropolitan Reports.

CHEMISTS' ASSISTANTS' ASSOCIATION.—The members of this association were to have spent a botanical evening at Mr. F. J. Hanbury's residence on Thursday, but owing to the death of Mrs. Hanbury's mother the visit to Clapton had to be postponed. The next meeting will be held on February 6, when Mr. J. Castell Evans, F.I.C., will read a paper on "Some Blow-pipe Reactions interesting to Pharmacists."

AN INSANE CHEMIST—THEFT OF MILK.—The charge against Richard Thomas (29), chemist, Russell Villa, Seven

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BIRMINGHAM.

NOVEL WINDOW-DISPLAY.—The sketch below represents an attractive shop window lately exhibited by Mr. A. Blackburn, Moseley Road, Birmingham. The drawing has been



Sisters' Road, who was indicted for stealing a quart of milk, value 5d., has now been disposed of. At the trial on Tuesday Dr. Gilbert, of Holloway Prison, said he had the prisoner under his charge from September 28 to October 4 of last year, and since January 7 of this year. He did not think he was capable of pleading. The prisoner was in the habit of singing in his cell, sometimes abstaining from food, and declaring that he could make 70% a minute by painting the floor. The jury found accordingly, and Thomas was ordered to be kept in custody during Her Majesty's pleasure.

ALLEGED BREACH OF CONTRACT.—In the City of London Court on Monday the case of Forbes, Abbott & Lennard v. Hecker was before Mr. Commissioner Kerr upon an application by the defendants for further and better particulars. The plaintiffs, Messrs. Forbes, Abbott & Lennard, chemical manufacturers, Ingram House, Fenchurch Street, E.C., instituted the action to recover 40l. 5s. 8d., the balance of an account of 6,640l. 5s. 8d. for sulphate of ammonia supplied to the defendants, Messrs. Paul Hecker & Co., 14 Mincing Lane, E.C., 6,600l. having been paid on account. Mr. George Kebbell (Kebbell & Miller), who appeared in support of the application, said there were several contracts entered into between the parties, and the only particulars given were "to goods supplied from September to October, 1889." On behalf of the defendants he had filed a heavy counter-claim for short weights and inferiority of the quality of the goods supplied, which considerably overtopped the claim. A representative of Messrs. Ingledew, Ince & Colt, the plaintiffs' solicitors, denied the short weights, and said the action was remitted from the High Court. They were suing on an account stated. Mr. Commissioner Kerr said if they confined themselves to an account stated there the particulars need not be given, otherwise he must grant the application. The plaintiffs' representative said they would give the particulars. The application was therefore granted, with costs.

made from a photograph sent to us, which not being distinct in all points may not be quite correctly rendered.

THE CHEMISTS' BALL.—The nineteenth annual ball promoted by the Midland Counties Chemists' Association, was held on Thursday of last week at the Assembly Rooms, Edgbaston. The gathering was successful to an eminent degree. The attendance was not quite so large as the previous year—a circumstance which added considerably to the comfort and enjoyment of the visitors—but the dresses of the ladies were more elegant and varied, and the bright appearance of the always handsome ball-room was heightened by the tasteful arrangement of delicately-tinted drapings. The evening commenced with a promenade concert, at which some choice selections of music were played, and dancing followed. This started at half-past eight o'clock, and was continued until half-past two the next morning. The dances could not have been better selected, and the music supplied by Mr. A. W. Gilmer's band was excellent. Mr. E. J. Reynolds officiated as M.C. A considerable number of pharmacists from Birmingham and the district were present, including Mr. F. W. Wyley (president of the association), Professor Hillhonse, Professor Elliott, Mr. A. Sonthall, Mr. E. Thonger and party, Mr. W. H. Pullen (Leamington), Mr. F. Barlow, Mr. T. Chapman, Mr. E. Ferriday and party, Mr. T. W. Chapman and party, Mr. R. D. Gibbs and party, Mr. J. O. Morris and party, Mr. G. E. Perry, Mr. C. J. Arblaster, Mr. W. Jones and party, Mr. F. H. Alcock, Mr. Horton and party, Mr. R. Milward and party, Mr. Ellis and party, Mr. F. Winfield and party, Mr. Aubrey and party, Mr. A. Trowey and party, Mr. J. Kneall and party, Mr. T. Lowther and party, Mr. T. Wakefield and party, Mr. A. Nicholson and party, Mr. A. Mansfield and party, Mr. W. B. Featherstone, M.D. (London), Mr. W. B. Featherstone, F.C.S. (London), Mr. H. and Mr. A. Homer and party, Mr. Shorthouse and party, Mr. S. Belcher and party, Mr. Wilton and party, &c. Councillor Barclay was unable to be present.

through illness. The ball, as well as being a social, was a distinct financial success.

BRADFORD.

INACCURATE DISPENSING.—At the Police Court, on January 23, Moorhouse Charlesworth, chemist, of Idle, was summoned, under the Food and Drugs Act, for selling medicine not compounded according to prescription. Superintendent Symonds said that a prescription taken to Charlesworth's shop on December 10, and made up by him, was, on analysis, found to contain 8 oz. of water instead of 12 oz. Mr. Scott (Messrs. Berry, Robinson & Scott) appeared for Charlesworth, who pleaded guilty, and said that the medicine to which the prescription referred was simply a tonic composed of quinine, iron, and chloroform water. The only result of the mistake would be that the person for whom the medicine was intended would unwittingly take a rather stronger dose than was prescribed. The bench took a lenient view of the case, and dismissed it on payment of costs.

CARMARTHEN.

THE DRUGGIST REPLACES THE BISHOP.—The following, from the *South Wales Daily News*, refers to a late well-known Welsh chemist and druggist:—A correspondent writes: The quiet little village of Abergwili, near Carmarthen, wherein is situated the episcopal seat of the Bishop of St. David's, is fermented by the recent action of the bishop of the diocese, who, in conjunction with the vicar of the parish, the Ven. Archdeacon W. E. James, has removed the memorial window erected in the church to the late far-famed Bishop Thirlwall. This window had been set up in the chancel, in the east end, but has now been removed to the west end of the church, and therefore the people will, in future, have their backs turned towards it. "And why was this done?" will be the natural question. It was not because "westward the course of civilisation wends its way," but in order that a certain J.P. of Carmarthen town should raise a window in commemoration of his late father, a good man enough, no doubt, and a deacon in a Nonconformist chapel, who, during his lifetime, was fortunate enough to amass great wealth. But, with due respect to the dead, do I ask, had the late Mr. E. B. Jones, of Lammas Street, Carmarthen, done more, or even as much, towards promoting education and religion as the late Bishop Thirlwall, a man who has not an equal as a scholar, linguist, historian, and theologian on the episcopal bench of the present day. The action of Bishop Jones and his subordinate tends to show that the quiet, unassuming, but rich druggist at Lammas Street was more to be honoured than one who, in the country's opinion, deserved a resting-place in Westminster Abbey.

EASTBOURNE.

CHEMISTS AND COLOURED FIRES.—At the Police Court last week, Herbert Crook, chemist, Terminus Road, was charged with manufacturing coloured fire on his premises, without having the necessary licence, on or about November 5; and also with failing to pack a certain quantity of the coloured fire as prescribed by the Act. Mr. Crook pleaded guilty, and in extenuation said the mixture was utterly free from any liability to spontaneous combustion. He had no idea the preparation was included in the Explosives Act. He had not made the fire as a means of profit, but simply to oblige the Bonfire Boys. The clerk said it did not appear very clearly from the Act that coloured fire was included, but the orders of the Home Office showed that it was. The chairman said they could not fine the defendant very heavily for his ignorance of certain parts of a very complicated Act, but they must take some notice of the offences. The clerk said the maximum fine would be 100% in the one case, and 20% in the other. The bench thought justice would be done by imposing a fine of 1s. and costs in each case, the total penalty being 27s.

IPSWICH.

SEQUAH'S BIRTHDAY.—Sequah is now staying in the town, and is attracting large audiences in the Drill Hall and

doing the same roaring trade as has been reported from other towns. Last Friday he kept his fiftieth birthday, flowers, farmyard produce, and letters in delicate feminine writing flowed in upon him all day, and in the evening a torchlight procession was organised.

KIDDERMINSTER.

AN AMMONIATED COUGH-MIXTURE.—At the Kidderminster Police Court, on Saturday last, Edward Davies, herbalist, of Walsall, was charged on remand with causing grievous bodily harm to a weaver named Reece, by selling him a solution of ammonia as a cough-mixture. The evidence showed that the defendant, who was undefended, was offering for sale in the market on the previous Saturday small bottles of liquid for coughs, colds, or influenza. Reece, who told the defendant he was suffering from a bad cold, purchased a bottle of stuff, for which he paid 3d., the defendant telling him he was to take the contents of the bottle at bedtime. When Reece got home he swallowed the liquid, and was immediately seized with the most intense pain. The mouth and the stomach were very seriously burned, and he cried out that he had been poisoned. His wife gave him an emetic of salt and water, which increased the pain. Dr. Moore was sent for, and, finding the man to be in a dangerous condition, ordered his removal to the infirmary, the doctor having first given him two emetics, the first of olive oil and the second of vinegar and water, which caused him to vomit. Dr. Rust, house surgeon at the infirmary, said he treated Reece as suffering from the effects of an irritant poison. Reece was cured from the immediate effects, but whether there would be any after-effects he could not state. The lining of the stomach had been intensely irritated by the presence of the acrid poison. Mr. Westover and Mr. Steward, of the Medical Hall, stated that the liquid in several bottles found in defendant's possession, similar to that given to Reece, was a solution of ammonia gas coloured with burnt sugar. The defendant said he was very sorry the liquid had injured the man, and he should be grieved if he died. As long as he lived he would never sell another bottle of the stuff. He admitted to the chief constable that he made up the contents of the bottle, and it consisted of "ammonia, aqua pura, and burnt saccharine matter." The bench committed defendant for trial to the Quarter Sessions.

LEEDS.

A CHEMIST ASSAULTED AND ROBBED.—On Thursday night, January 23, Mr. Benjamin Taylor, a member of the firm of Taylor & Fletcher, chemists, Briggate, was on the way home to his residence in Moorland Road, about half-past nine o'clock, when he was attacked by three men. He was forced to the ground face downward, while his assailants rifled his pockets of about 2l. in money and a gold watch and chain. Unfortunately, in his fall to the ground, Mr. Taylor broke his leg, and when the thieves made off he was unable to rise. He was found later in this condition by two young gentlemen who knew him. They secured a cab, in which Mr. Taylor was taken home, and Mr. Thomas Scattergood, surgeon, was sent for. He attended to the unfortunate gentleman's injuries, and afterwards informed the police, who are now in charge of the case.

LIVERPOOL.

ANOTHER CHANGE.—Mr. G. Alexander, of William Henry Street, having relinquished the business of chemist and druggist in favour of dentistry, has resigned his seat on the Council of the Liverpool Chemists' Association. Mr. Buck, junr. (who recently read an excellent paper on concentrated infusion of senega), has been elected to fill the vacancy.

DEATH BY CHLOROFORM.—On January 27 a dock labourer, named John Harrington, aged 38, whilst assisting at unloading a vessel in the river, dislocated his shoulder. He was at once taken to the Northern Hospital, where chloroform was administered, and he died under its influence. This death, it will be noted, is subsequent to the publication of the report of the Hyderabad Commission.

INFLUENZA AT BAY.—The comparative immunity of Liverpool from the epidemic is possibly due to the bold front put on by local advertisers. Salt Regal is everywhere put forth as an "infallible preventive." Oil of eucalyptus globulus (note the "globulus") is stated by the B. I. P. Co. as "never failing," and to take "Bovril" twice or thrice daily renders one absolutely safe. These, with any quantity of "advice gratis," are, no doubt, rather more than the germs care to attack.

PHARMACEUTICAL STUDENTS' SOCIETY.—The fortnightly meeting of the above was held on January 23. There was only a small muster of members. Mr. Mitchell drew attention to the following prescription, which he had made up during the week:—

Antipyrin	gr. x.
Spt. æther. nit. ..	℥ xxx.
Liq. ammon. acet. ..	℥ ss.
Aq. ad	℥ j.

If mixed in the order written it developed the green colour, about whose toxicological action there is some suspicion, but he found that by adding the liq. ammon. acet. to the antipyrin first dissolved in a portion of the water, and then the spt. æther. nit., there was no development of the green colour. It was suggested that this was perhaps due to the liq. ammon. acet. being slightly alkaline; Mr. Mitchell, however, stated that the liq. ammon. acet. used was neutral. Mr. Wokes read a paper on "Glyco-gelatine." The author advocated the more extended use of this body, and pointed out its numerous advantages as a stock base, not only for jujubes, but also for bougies, suppositories, &c. He considered that Martindale's formula gave a base which was too leathery, and offered the following as an amendment:—

Best clear gelatine	1 oz.
Glycerine	3½ "
Water to	6 "

which yielded a base of nice consistency, and beautifully clear. He showed samples of various jujubes he had prepared, such as cocaine, ammon. mur. and borax, bismuth carb., codeine, &c., and also some green extract suppositories, in which the extract was practically in solution, owing to the amount of water and glycerine present. He had found some difficulty in obtaining a suitable mould for the pessaries shown, which were of somewhat unusual shape, and after many experiments had fixed upon one of hard paraffin, the only drawback to which was the fact that the mould only sufficed for one pessary, having to be broken in order to extract the contents. It was suggested that this might be overcome by the use of a harder paraffin, and cutting the mould down the middle and securing it for use with an elastic band.

NEWCASTLE-ON-TYNE.

CHEMISTS ASSISTANTS' AND APPRENTICES' ASSOCIATION.—A meeting of this Association was held on Wednesday evening, January 23, Mr. D. H. Oxen in the chair. Mr. A. J. Curwen read a paper on "Sugar and its Preparations." After a lengthy and rather humorous introduction, the author stated that sugar existed in vegetable and animal substances, but more abundantly in the former. To a large extent sugar as a vegetable product was found in dried fruits—figs yielding about 10 per cent. of sugar; tamarinds, 12 per cent.; prunes, 16 per cent.; and dates as much as 35 per cent. The sugarcane requires about twelve months to mature, and its life lasts about one year, after which the cuticle becomes smooth, and it is ready for crushing, &c., during which process lime is added to neutralise free acid present, and to render the product more liquid and separable. The uncrystallisable portion is called molasses, or treacle. The raw or brown portion thus formed is again purified by the lime and bullock's-blood process. Sugar, he said, should not contain "too much sand for table use and not enough for building purposes." After speaking of the composition of sugar, and the various functions it performed, he called attention to sugar as found in the B.P. Forty-four preparations in the B.P. contained sugar. In pulv. glycyrr. co. he thought the quantity of sugar too great—by that he meant there was more sugar than anything else. Speaking of "syrups" he gave the following

formula for syrupus simplex as being a much more satisfactory preparation than the B.P.:—

Sugar	2 lbs.
Distilled water.. ..	℥ j.
Solve sec. art.	

This, he stated, was not perfect, but it had the merit of being a syrup, whereas the official preparation was Sugar Candy & Co. (Unlimited). In the iodide of iron syrup he recommended the addition of $\frac{1}{4}$ grain of citric acid to the oz., which retards the chemical change and preserves the colour for a considerable time. In syr. scillæ he suggested the addition of 1 per cent. of ac. acetic. Saccharin was much too dear for ordinary practical purposes, although probably in time it would supersede sugar. A discussion followed, in which the chairman, Mr. G. F. Merson, and Mr. Bell took part; after which the chairman favoured the company with a recitation of "The Yarn of the Nancy Bell."

SHEFFIELD.

A DRUG RAID.—The Health Committee seems to have made up its mind that the Sheffield public are not getting value for their money in drugs. The result has been nothing less than a "raid" on the usual articles. An inspector acknowledged to having visited about forty shops in the town in one day, and these include not only the weaker members of the craft, but also the stores and many of the leading chemists. The articles in greatest demand were sp. ammon. ar., ferri et quin. cit., pot. bitart., and a mixture containing pot. iod. 3iij., aq. chlorof. ad 3viiij. Great revelations and a big fight are expected in well-informed quarters. In connection with the raid a good story is told to the effect that a well-known wholesale man received an order from a retailer which read as follows:—"Please oblige with sp. ammon. ar., B.P., 3ij.; aq. chlorof., 3viiij. These are wanted for analysis, hence my caution." It is said that the wholesale man declined to supply, on the grounds that the retailer had never done business with him, and that therefore it was unfair to saddle him with the risk involved. It seems that the wily retailer had recognised the inspector and asked him to call back, as he had not one of the articles in stock. Another of the knowing ones spotted his man, and asked two guineas for the material supplied. Rumour says that he and the inspector, after some "haggling," effected a compromise.

IRELAND.

MR. E. W. ALLSOM, L.P.S.I., has been appointed to the chair of Chemistry at Cork.

THE Belfast authorities have decided to build dispensary and compounding offices at Craven Street.

CONTRACTS.—Tenders for a year's supply of druggists' sundries are invited by the governors of the Killarney District Lunatic Asylum (February 14). The contractor appointed will be required to defray cost of carriage, and find sureties for the proper discharge of his duty.

THE WEEK'S POISONINGS.—James McNeill, a Newry jeweller, endeavoured last week to get outside of a quantity of spirits of salts used by him at his trade. His rash act was, however, cut short before he got down the second mouthful. An emetic promptly administered saved his life. A Dungannon man, named Loughran, obtained from a local chemist a mixture to be taken in twenty-three doses. Believing, however, that the extent of his illness was in proportion to the duration of the medicine he drank it all at once, with the result that next morning he was found dead in his bed.

CHEMISTS' AND DRUGGISTS' ASSOCIATION OF IRELAND.—The annual social reunion and general meeting of the Belfast branch of this body was held on Friday evening, January 24, at Wellington Place, Belfast. Notwithstanding the severity of the weather, there was a large attendance of members, associates, and friends. The hall was festooned with evergreens, kindly supplied from the grounds of Mrs. S. Gibson, Montpelier. The following ladies presided at the tea tables:—Lady Haslett, Mrs. S. Gibson, Mrs. S. Clotworthy, Mrs. Doig, Mrs. Welsh, Mrs. Watson, and Mrs.

Campbell. After a liberal discussion of Assam and Pekoe, Sir James Horner Haslett (President) took the chair and delivered a short speech, in the course of which he called attention to the work done during the past year, made some pointed allusions to the famous Amendment Bill, and congratulated the members on the sturdy attitude maintained by the Association in defending its rights. The Secretary, Mr. Rankin, then submitted the annual report, and moved its adoption. Mr. Campbell seconded the motion, which was passed *nem. con.* The treasurer's report was read by Mr. S. Gibson. Mr. Gibson stated that he had a list with the names of several gentlemen who had authorised him to enter their names on behalf of a guarantee fund, the total amount already promised being in excess of 300*l.* The treasurer's report was unanimously passed. After the business a musical and literary treat was contributed by Messrs. Aspinall, Pyper, Devers, Boyd and Smith, Mr. Leighton presiding at the piano.

SCOTLAND.

DUNDEE.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—The association met on Thursday, January 23, at 9.15 P.M. There was a full attendance of members. The president, Mr. John Forsyth, occupied the chair, and introduced Dr. P. Murison, who read a paper on "Tar." After a few introductory remarks the Doctor gave an interesting history of our coal and its various sources and kinds, and then detailed the processes through which it went before gas was obtained, in the manufacturing of which tar is a by-product—a by-product which, though long somewhat useless, was now proving a perfect mine of wealth to scientific workers. In this description he was aided by a large and well-executed diagram of a gas-works, and this to many of the members who had never seen the internal arrangements of such a works, proved very interesting and instructive. Having, figuratively speaking, now obtained tar and separated it from the ammoniacal liquor with which it is associated, the essayist proceeded to distil it in order that it might disclose its hidden properties. The retort, he explained, having been heated until no more came over, the distillate was examined, and found to consist of three layers—namely, light oil, watery fluid, and dead oil. The Doctor then described the fractional distillation of these two oils, taking in turn benzol, toluol, and several of the more important substances relating to pharmacy which were obtained. A lengthened description was also given of the preparation of the various aniline dyes, and he stated that it was his intention to have practically demonstrated this part of his subject by preparing one or two, but he had been unable to obtain pure aniline in Dundee, and it was too late to send elsewhere. The preparation of carbolic and picric acids was also fully entered into. In conclusion, he referred briefly to wood-tar, and enumerated the various substances obtained therefrom. The lecture was listened to with great attention, and at the close a hearty vote of thanks was accorded to Dr. Murison on the motion of the president. The secretary afterwards intimated that there was still on the syllabus a vacant debate, and asked that two of the members might volunteer to fill it. This was done by the president and Mr. R. Lindsay, who are to discuss the subject—"Ought the B.P. to be strictly followed when dispensing?" the former taking the negative side. This was all the business, and a vote of thanks to the chairman concluded the meeting.

GLASGOW.

At Paisley, on Wednesday, Edward Edwards, a photographer, committed suicide by drinking a solution of potassium cyanide.

THE MINERAL SPRING AT ROTHESAY.—Professor Macadam, Edinburgh, has examined several samples of the water from the noted spring on the Rothesay beach, and reports that its composition closely resembles the famed Harrogate waters, only that the Rothesay water is twice as strong in H_2S , and that in this respect it is also superior to the Strathpeffer product. Professor Macadam considers that as a medicinal water the Rothesay well should be at least equal to the Harrogate waters, while the proportion of saline matter in

the Rothesay spring adapts it better for bathing purposes than the Strathpeffer waters. The Rothesay water would likewise be of greater use in cases requiring salts along with H_2S , or where the latter alone is necessary. Professor Macadam assigns a high therapeutic value to the Rothesay spring, and has no doubt that, if properly attended to, it would be a valuable addition to the many advantages Rothesay already offers to invalids.

GREENOCK.

INTERDICT AGAINST A MANUFACTURING CHEMIST.—An action has been brought in the Sheriff's Court, at the instance of Cameron's trustees, proprietors of a property in Cathcart Street, who sought interdict against John Matchett, tea merchant, 45 Cathcart Street, and James Wallace Thom, manufacturing chemist and medicated lozenge manufacturer, 49 Cathcart Street, to prevent them from manufacturing or selling medicated lozenges or confections of any kind in the shop at 49 Cathcart Street. The premises were originally let to Matchett, on condition that he should not sub-let the shop for a business similar to that carried on by any other of the pursuers' tenants. The shop was let to him at 48*l.* per annum, but he afterwards sub-let it to the defender Thom, for the manufacture and sale of medicated lozenges or confections, while a shop in the pursuers' property immediately adjacent was occupied by a confectioner. The defender Matchett held that, having a simple lease of the shop, without any condition as to the use thereof, he was entitled to sub-let the same to be occupied for any purpose not contrary to law; and the defender Thom held that Matchett sub-let the shop to him unconditionally, and that in consequence interdict should not be granted against him. Sheriff Begg issued an interlocutor on January 23, interdicting the defenders from manufacturing or selling medicated lozenges in the said shop, and allowed the pursuers' expenses.

General and Provincial News.

THE REVISION OF THE RUSSIAN CUSTOMS TARIFF.—It is now announced in Russian journals that among the articles on which it has been decided to increase the import duties are gelatine, glycerine, oils, phosphorus, ether, collodion, fruit-essences, perfumery, and chloral.

SULPHATE OF COPPER FOR BARCELONA.—Notices have been published in the *Official Gazette* of the Province of Barcelona to the effect that it has been decided to obtain in foreign markets, where it is manufactured, a quantity of pure sulphate of copper for distribution to vine-growers in the province whose vineyards are attacked by mildew. Manufacturers are invited to send samples, with quotations, to the "Provincial Deputation" at Barcelona, either direct or through their agent.

AMERICAN TARIFF REVISION.—The Committee of Ways and Means of the United States House of Representatives is now receiving suggestions for the modification of the United States customs tariff, and, as is usual on such occasions, representatives of all manner of industries are complaining to the committee of the insufficient protection extended to their particular branches of trade. We see in the *Oil, Paint, and Drug Reporter* that the drug trade are well represented among the clamouring clan. Chas. L. Randall said that up to two years ago the American mica business had been fairly profitable, but that since then it had been forced to the wall by the opening up of mica mines in Canada, and especially in Asia. He asks for a specific duty of \$7 per lb. on mica. John Robertson, representing the cork manufacturers of the United States, asks for an increase of the duties on cork—25 per cent. *ad valorem*—the present rate being considered insufficient. Wm. A. Van Sickle requests the committee to impose a duty on sugar of milk, because the competition of the Swiss makers has beaten prices down below a profitable figure. In answer to a member of the committee, Mr. Van Sickle admitted that from raw material costing from 3 to 5 cents he could make 42 cents worth of sugar of milk. Mr. Speare, in behalf of manufacturers of potato-starch, also asked that the duty on

dextrin be made at least 3 cents a lb. Mr. Eugene Waugh asked a duty of $\frac{1}{2}$ cent a lb. on sulphuric acid, which is now free. He complained of Canadian competition. Virginia and Missouri are interested in the mining of barytes, and their representatives appeared to urge the substitution of a specific rate of $\frac{1}{4}$ of a cent per lb. on crude barytes for the present rate of 10 per cent. *ad valorem*. In Virginia it appears that six out of the nine mills which were in operation six years ago have been closed on account of the competition from Germany. Barytes from the Hartz Mountains are laid down in New York at \$2.85 per ton, and, after paying a duty of 10 per cent. *ad valorem*, suddenly acquire a market value of from \$6.50 to \$8 per ton. In Virginia, according to the same authority, it costs \$3 per ton with the cheapest labour there procurable to mine a ton of barytes and place it aboard the cars. The representative of Missouri appeared in behalf of the producers of barytes used in the manufacture of paint, asking that the duty be increased to meet large importations from Germany, whence the barytes come as ballast. The industry had been broken down by the tariff of 1883, and could be revived only by the restoration of the old rates. M. H. Dingee, of Lynchburg, Va., producer of barytes, said that the material was hauled 1,000 miles from the Hartz Mountains, and delivered on board vessels at German seaports at \$2.85 a ton, while he (witness), paying his negro miners \$4 a week, and bauling it half a mile, could not produce barytes at less than \$3 a ton.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

THE COLOUR OF IODINE SOLUTIONS.—At the last sitting of the Academy of Sciences, a note on the subject was presented by M. Gautier who has reason to believe that the difference in colour is owing to a difference in the molecular state of the metalloid. In the brown solutions, like the alcoholic, for instance, the iodine molecule stands as I_2 , while I_3 is the molecule present in carbon bisulphide and chloroform solutions. [A communication presented to the Chemical Society of London last session forestalled this discovery.—ED. C. & D.]

A TAIL-END TO THE EXPOSITION.—As was done before on like occasions, a grand tombola or lottery was, near the end of the exhibition, started under Government auspices, the proceeds to be applied to some charitable purpose or other. The prizes range all the way from jewellery worth 200,000f. down to a pair of suspenders and all sorts of gimcracks left over from the great fair. At first the tickets sold rather slowly at par, that is, 1f. But as the lottery is to be drawn this week, Parisians are getting crazy. Last Monday 2f. was asked and paid for tickets, and now they cannot be had for love or money. But the funny part of it is that the first series sells higher than the other, because after the Exhibition of 1878, a ticket of that series drew the grand prize.

INTERNE PHARMACISTS FOR THE HOSPITALS.—Official notice has been given that on March 17, a competition will be held for situations of interne pharmacists in the City and Seine department hospitals and asylums. The conditions require that candidates must be of good moral character, aged between 20 and 27, and provided with certificates showing they have served three years in regular pharmacies, one year at least being in the same establishment. The preliminary part of the competition shall consist of (1) the identification of 20 plants or simple substances pertaining to materia medica; time allowed five minutes; (2) identifications of 10 pharmaceutical preparations, and a brief description of the process for one of them, time ten minutes. Next, candidates shall, (1) after ten minutes reflection speak for ten minutes on a given chemical or pharmaceutical subject, and (2) write an essay on a question of pharmacy, chemistry, or materia medica, time allowed, three hours. All the plants, substances and preparations to be identified shall be the same for all candidates, and all shall treat of the same question, both orally and in writing.

CAUVET (DÉSIRÉ), the pharmacist-in-chief of the Hôtel-Dieu hospital at Lyons, died on January 23, from infectious

pneumonia consequent upon influenza. Deceased, who was born in 1827 at Agde (Hérault), first joined the service as a military pharmacist, and in 1867 became by competition a fellow (professeur agrégé) of the Strasburg College of Pharmacy. In 1871 he was appointed a professor to the same superior school, then transferred to Nancy, but soon after was ordered to Vincennes, near Paris, as pharmacist-in-chief of the military hospital. Subsequently he became a professor of materia medica in the Lyons faculty of medicine and pharmacy, and the pharmacist-in-chief of the Hôtel-Dieu, both of which positions he held to his death. M. Cauvet was the author of a number of works and didactic treatises, among which we may mention a quarto volume on Solanaceæ; Vegetable anatomy and physiology; Practical processes for testing flour; New elements of materia medica; New elements of medical natural history. The two last are text-books, in two volumes each, intended for pharmaceutical students, and to judge from the thumb-marks on the copies in the Paris College of Pharmacy library, the young men must often read and consult both treatises.

THE POPULATION IN FRANCE, on the whole increases very slowly, as is well-known, owing chiefly to birth deficiency. The shortcoming, however, is partly made up by foreign immigration, representing 3 per cent. of the population. According to official statistics the birth rate for the whole country is 22.2 per mille, while it is 22.1 for natives, and 25.8 for foreigners. The following is the rate for different nationalities. English, 13.1; Swiss, 21.6; Germans, 23.4; Spaniards, 24.3; Belgians, 24.4; and Italians, 35.8. The low rate of the English is probably owing to the fact that many of them are but temporary sojourners, and this also most likely explains their comparatively high contingent to the number of illegitimate births. Out of 100 children born out of wedlock from foreign parents, 7 are Spanish; 11, Italian; 13, Belgian; 16, English; 17, Swiss; and 24, German. For Paris alone the proportions are, English, 38; German, 33; Swiss, 21; and all others, 8. As regards the death-rate, the proportion is smaller, the Germans alone excepted, among the foreign than the native population. The English, especially, show a death-rate barely one half that of the average for the whole country. Here again the same reason already given applies also, most likely. To compare the sexes, among Italians and Spaniards more women die than men, while the contrary occurs with the English, Belgians and Swiss, and especially the Germans. On taking into account the lower death-rate of foreigners, and their higher birth-rate, it is calculated their natural increase is, all proportions being considered, ten times that of the native population. It may be interesting to note here that, to a less extent, a similar state of things has been observed in America. And no one will wonder, since emigrants as a rule are healthy persons in the prime of life, with comparatively few old men and invalids.

Personalities.

"SIR DYCE DUSTWORTH, M.D.," was, according to a New York contemporary, one of the performers at the last Bloomsbury evening meeting.

MR. F. ROWE has purchased the business lately carried on by Mr. Ganm, the Strand, Starcross, Devon.

MR. WILLIAM MARTIN has succeeded to the business of Mr. Cullwick, High Street, Southampton.

MR. GEORGE BREEZE, chemist, has been elected an alderman by the Devonport County Borough Council. He had twenty-seven votes, as against three divided between two opponents.

RADAM'S MICROBE-KILLER, which is now being offered in this country, has been examined by Dr. R. G. Eccles, who reports to the *Druggists' Circular* that the compound is prepared by a quondam Texas florist. Dr. Eccles's analysis of the compound results in the following formula:—Oil of vitriol, impure, 4 drachms; muriatic acid, impure, 1 drachm; red wine, about 1 oz.; well or spring water, 1 gallon.

CANADIAN NOTES.

MORE STUDENTS are now attending the medical faculty at McGill University, Montreal, than there ever have been before.

THE ONTARIO COLLEGE DIPLOMAS are to be recognised without examination by the boards of pharmacy in Alabama, Columbia, Connecticut, North Dakota, South Dakota, Florida, Georgia, Missouri, New Jersey and Wisconsin. Others will follow the example, as Mr. John A. Clark, president of the Ontario society, has taken the matter in hand.

THE DRINK QUESTION.—The Toronto Druggists' Association have seen reason to go back on the decision, reported in our last letter, regarding the sale of alcoholic liquors. According to that it was decided to sell only on physicians' prescriptions, but there was a legal informality about the November meeting. For that reason the minutes, and with them the resolution, were not approved. On this a warm debate arose, and the majority of the meeting seemed to be in favour of retaining the privilege of retailing liquors. At present druggists can sell 6 ozs., but no more, of any alcoholic liquor without a doctor's prescription.

COUNTER PRESCRIBING.—A case of considerable importance to druggists has just been decided by Magistrate Flint at Bellville, Ontario. A detective, employed by the College of Physicians and Surgeons of Ontario, went on December 5 to W. R. Carmichael's drug store in Bellville, and telling Mr. Carmichael that he was unwell (he thought he had "the dumb ague") asked for some medicine. Mr. Carmichael put a few simple questions to him, regarding the condition of his appetite, bowels and so forth, and then proceeded to make up a bottle of medicine, for which 50 cents was charged. The detective then instituted proceedings; and Mr. Carmichael's colleagues in Bellville resolved to defend the case. Mr. L. W. Yeomans, a chemist of the town, stated for the defence that Mr. Carmichael had done no more than chemists had done in his experience for thirty years past, and another witness, a solicitor who had served his time to the drug trade, stated that fifty years ago the practice was just the same. In his decision, which was given after a week's deliberation, the magistrate entered into the different points of the case very fully, and concentrated the whole upon two points, first, holding that the proof that Mr. Carmichael practised medicine was not sufficient, the prosecution having failed to show that he did so habitually and as a profession. The second point was, did the defendant practise for hire, gain or hope of reward? The magistrate thought not, because defendant asked and received the fair, reasonable price of the drugs only, and there was no evidence that he prescribed in any case or for any other person than the prosecutor, on the one occasion. The magistrate therefore decided that defendant did not practise medicine on the occasion charged for hire, gain or hope of reward, and dismissed the case with costs.

MARRIAGE.

[*Notices of Marriages and Deaths are inserted free if sent with proper authentication.*]

KIRBY—THOMPSON.—On January 22, at the parish church, Beckenham, by the Rev. Canon Kirby, R.D., Rector of Barnsley, uncle of the bridegroom, assisted by the Rev. Norman W. Shelton, Precentor of Gloucester Cathedral, and the Rev. Henry Arnott, the rector, the Rev. William Weldon Kirby, B.A., Clare Coll., Camb., youngest son of Edmund A. Kirby, M.D., of Kelsey Park, Beckenham, to Alice Maud, third daughter of John Thompson, Esq. (Messrs. S. Maw, Son & Thompson), of Oakfield, Eden Park, Beckenham.

DEATHS.

GULL.—Sir William Withey Gull, Bart., the eminent physician, died at his residence, 74 Brook Street, W., on Wednesday afternoon, January 29, after two days' illness, due to a second attack of paralysis which seized him on Monday.

Sir William had never quite recovered from the paralytic attack which he had two years ago. With his death one of the most notable physicians of modern times has passed away. He was born at Thorpe-le-Soken, Essex, in December, 1816, and was the son of a barge-owner, who was a tenant of Guy's Hospital, and to that fact was due the events which led to young William's adoption of a medical career. After his education in Christ's Hospital, for which the treasurer of Guy's gave him a presentation, he accepted a post as usher in a school at Lewes, and from there he went to Guy's Hospital to prepare a catalogue of the hospital museum. While at this work his desire to study medicine took definite form, and in 1837 he became a pupil at Guy's. His career as a student was most honourable to him; he graduated M.B. in 1841, and M.D. in 1846, at the London University, and was the first medical graduate who was nominated on the Senate by the Crown. He was appointed Fullerian Professor of Physiology at the Royal Institution of Great Britain in 1847-48; was elected a Fellow of the Royal College of Physicians in 1848; and for 20 years acted as physician and lecturer to Guy's Hospital, retiring from that position about 1867, though he resumed his connection with the institution in 1871 by accepting the post of consulting physician. His career as one of the leading physicians of the day may be said to have begun in the year 1857, when he attended Bishop Blomfield in his last illness. From this time his reputation rapidly extended, and in 1871, when the Prince of Wales was attacked with typhoid fever, he was the principal medical attendant, and his successful services on that occasion earned for him the baronetcy conferred in January, 1872. Sir William Gull was, at his death, one of her Majesty's physicians-in-ordinary. He was the recipient of many academic honours in his lifetime, and was a fellow of several learned societies. As a consulting physician few have equalled him in the manner in which he won the confidence of his patients—indeed, half the cure must often have been due to the quiet yet forcible way in which he dispelled the fears of the patient. As a therapist, Sir William Gull was in many respects ahead of the profession. Quite early in his career he came to the conclusion that it is possible to give too much medicine, consequently his prescriptions were always of the simplest character, seldom heroic, rarely consisting of more than a single remedy in an elegant vehicle. In 1848, while still a resident official at Guy's Hospital, Sir William married a daughter of Colonel Lacey, of Carlisle. Lady Gull and a son and daughter survive him. The son, Mr. William Cameron Gull, who inherits the title, is a barrister, and the daughter is married to Dr. Acland, of Brook Street, son of Sir Henry Acland. The funeral will take place on Monday next at Thorpe-le-Soken, near Colchester. There are many versions of Sir William Gull's early career as a student. The version which we give, is, we have reason to believe, authentic, but the following, given by the *Pall Mall Gazette*, as "by one who knew him," is of special interest to chemists. A small adventure, which by a mere chance interview as a boy-guide introduced him to no less a person than the resident Governor of Guy's Hospital, was the opening event of his great career. The Governor was struck by the beauty and intelligence of the boy, and his frank story of his love of reading, and he promised him a free education. From the Bluecoat School, where he was trained, he was translated by his patron to the gallipots of Guy's Hospital, and beginning with the humblest offices of pharmacy, he rose by dint of talent and hard work to the highest summit of fashion as a physician, the friendship of Princes, and all the honours which the ancient Universities could pour upon him. From the first, those who knew him intimately predicted his brilliant career.

HIGHWAY.—On January 24, at Sutton Road, Walsall, Mr. H. Highway, J.P., chemist and druggist. Age 80. Mr. Highway was for many years in business as a chemist in the town, but retired some time ago, when his son, Mr. M. H. Highway, succeeded him. He was the oldest magistrate for the borough. Mr. Highway was a member of the council some thirty years ago, and was mayor in 1851, and during his mayoralty he presented to St. Matthew's (parish) Church a handsome stained-glass window. He was also, at one time, a guardian of the poor. For some months he had been ailing, but his death was entirely unexpected in the

town, where he was very well known and very greatly respected.

HUTCHINSON.—On December 29, Mr. William Hutchinson, chemist and druggist, Harrop, High Town, Crewe. Aged 43.

JOBSON.—At New Rattray, Blairgowrie, N.B., on Jan. 25, Mr. William Jobson, chemist and druggist, late of Dundee. Aged 90 years. The deceased gentleman, one of the oldest members of the trade, was a native of Blairgowrie, and when a boy went to Dundee to assist his aunt, the widow of a Dr. Jolly, in a drysaltery business, which she carried on in the Murraygate. This business was a large and heavy one which had been founded by Dr. Jolly, and at his death in 1821 carried a stock valued at 1,358*l.* 6*s.*, which was considered large in those days. In time the business came into Mr. Jobson's own hands, and he continued to carry it on with success till 1874, when failing health compelled his retirement. A typical apothecary was Mr. Jobson: his tall, spare figure, clean-shaven face, and sharp features gave him an appearance superior to the heavy trade in whitening, oils, varnishes, and the like which he carried on. Latterly he had the help of two competent assistants, but, in spite of that, he never ventured into pure pharmaceutical work, which he thought could not be properly conducted along with a heavy retail trade, and it was his custom to send any prescriptions which came to him to Mr. Hardie, the principal pharmacist in the town. But as a drysalter the name "Jobson" was known in all Forfarshire, and people came from all parts to the semi-underground shop in the Murraygate, where they were sure of a big bargain, and of the best goods. For some years before his retirement Mr. Jobson had become very frail, and his hands shook as he weighed and measured, but he was always accurate nevertheless. Generally he was quiet and reserved in manner, seldom entering into conversation with customers—indeed, he was too busy for that. It was old age, not bad health, which compelled his retirement. He never had occasion to take physic, and it is told of him that on one occasion a lad called for a pennyworth of Epsom salts. He handed the 2 oz. with the remark—"Remember there is more than a dose for you there." The lad replied—"Oh! that will serve me a twelve-month." "Well," was the reply, "it's more than I have taken in 50 years." When Mr. Jobson retired he handed over the business to Mr. James Johnston, a nephew by marriage, and Mr. David Adams, his assistant. By them it was carried on until the death of Mr. Adams, and since that time Mr. Johnston has conducted it. Mr. Jobson was married, but his wife and daughter died many years ago. He was a man of considerable means, and owned house property and ground in Dundee, the rents of which he always collected himself up to the last term.

MILLER.—On January 3, Mr. John Miller, chemist and druggist, East Street, New Shoreham. Aged 80.

SHEPHERDSON.—On January 3, Mr. Reuben Shepherdson, chemist and druggist, Londesborough Street, Hull. Aged 58.

SUTHERLAND.—On January 17, at 92 English Street, Dumfries, Jane Constance Callander, beloved wife of John W. Sutherland, pharmaceutical chemist, Dumfries. Aged 22.

WALLIS.—On January 20, Mr. George Wallis, chemist and druggist, 57 St. James's Place, Plumstead. Aged 62.

WILSON.—On January 23, at Coventry, Mr. George Wilson. Mr. Wilson had been in the service of Messrs. Wyleys & Co., wholesale and manufacturing chemists, Coventry, for 38 years, and was highly respected.

SNAKE OIL.—Mr. George T. Atkins, of Dallas, Texas, has subjected some genuine rattlesnake oil to a physical examination, and sends a report to *Meyer's Druggist*. From this it appears that the oil is bright yellow and limpid at 70° F. Upper stratum thick and yellow; lower stratum filled with dirty white flaky deposit (animal fat) at 50° F. Separates clear when shaken with equal parts of 88-per-cent. alcohol. Same action with 2 parts of 88-per-cent. alcohol. Separates clear when shaken with one or two parts of ether. Does not saponify with ammonia in the cold, but does so on heating; the same applies to potash solution. Not affected by nitric acid in the cold. Slightly yellow if heated, and turns deep orange on standing. Congeals (so that it will not run) at 20° F.; freezes at 14° F. Liquid again at 50° F.

Trade Notes.

MESSRS. BIDWELL BROTHERS (LIMITED), brush manufacturers, have removed their business from Axminster to new and extensive premises at Ottery St. Mary, Devon.

MESSRS. BURROUGHS, WELLCOME & Co. are supplying a very attractive chromo as a show-card for lanoline soap and other preparations. They supply this upon request with orders for lanoline goods.

OWING to the increase of business, Messrs. Ford, Shapland & Co., medical label printers, have taken the premises adjoining their own in Whetstone Park, which for many years have been in the occupation of Messrs. Rowney & Co., also printers.

BOYS are selling through the streets a penny "Bovril Musical Album" containing the words and music of a dozen famous songs—at least, eleven of them are already famous, while the twelfth, entitled "Bovril did it," which we may describe as the *motif* of the publication, is not unlikely to establish itself.

MESSRS. BURROUGHS, WELLCOME & Co. say they have received quite a shoal of orders for tabloids of compressed drugs at reduced prices in consequence of their advertisement on page 94 of our last issue. They ask us to explain that the "reduced prices" refer to the saccharin tabloids only.

SODEN MINERAL PASTILLES, which have lately been kept prominently before the public as an influenza remedy, are, it is known, prepared from the salts obtained from the waters of certain springs at Bad-Soden, in the Taunus. These waters are also put up for sale by chemists, and where the pastilles have acquired a reputation it would be good business to introduce the waters.

THE aniline dye works of Messrs. I. Levinstein & Co. at Manchester (Blackley and Crumpsall) have been converted into a limited company with a capital of 150,000*l.* The proprietors of the new concern are the Farbenfabriken (vorm. F. Bayer & Co.), Elberfeld, the Actiengesellschaft für Anilinfabrikation in Berlin. Mr. Ivan Levinstein retains the managing directorship of the new firm, which will be carried on under the style of I. Levinstein & Co. (Limited). Before the amalgamation the British and German firms had for years carried on a fierce competition, and there has been more than one law suit between them concerning certain patent rights.

THE GLASS-BOTTLE INDUSTRIES (LIMITED).—The prospectus of this company has been issued during the week, and the subscription list for shares closes to-day (Friday). The capital announced is 1,400,000*l.* (1,000,000*l.* in ordinary shares, and 400,000*l.* in 7-per cent. preference shares). A further sum of 350,000*l.*, in 5 per cent. first mortgage debenture stock, has also been offered for subscription. The firms associated in this enterprise are the following:—Mr. Dan Rylands, Shepcote House, near Barnsley, and Dan Rylands (Limited), Barnsley; Messrs. Charles Borron & Co., Newton-le-Willows, Lancashire; Messrs. E. Breffit & Co. (Limited), Aire and Calder Glass Works, Castleford; Messrs. Robert Candlish & Son, Seaham Harbour, Durham; Messrs. John Kilner & Sons, Wakefield; Mr. Wm. Brooke, Hunslet, Leeds; Messrs. Bagley & Co., Knottingley, Yorkshire; Messrs. Lyon Bros. (Limited), St. Helen's, Lancashire; the Alloa Glass Works Company, Alloa, Scotland; Messrs. John Campbell & Sons, Glasgow; Messrs. George Wood & Sons, Hunslet, Leeds; Messrs. Thos. Turner & Co., Dewsbury; Messrs. W. & J. Wilkinson, Swinton, near Rotherham; Messrs. Geo. Taylor & Co. (Limited), Liverpool; Mr. James Wright, Brierley Hill, Staffordshire; Messrs. Peaseock & Son, Castleford; the Castleford Glass Bottle Company, Castleford; The Tees Bottle Company (Limited), South Stockton-on-Tees; the South Wales Glass Manufacturing Company (Limited), Crindau, Newport, Monmouth; Messrs. Blunn Bros., Kilnhurst, near Rotherham; Mr. J. Goodinson and others, Kilnhurst, Yorkshire; the Irish Glass Bottle Company, Dublin; Messrs. G. Moore & Sons, Blyth-on-Tyne, Northumberland; Messrs. Thos. Barron & Sons, Mexborough, Rotherham; Mr. Thos. Wood, Portobello, Scotland; Mr.

Robert Paul, Camlachie, Glasgow. The actual output of these firms last year is stated at 15,750,000 dozens, and the company believe that, taking into account their hopes of saving, &c., they will be able to reckon on a net profit of 2s. 6d. per gross. The purchase-money for the whole of the properties named above is fixed at 1,125,561*l.*, stocks to be taken at valuation.

NEW COMPANIES.

GRINDLEY & Co. (LIMITED).—Capital 20,000*l.*, in 5*l.* shares. Object, to acquire and take over as a going concern the business of tar, resin, and naphtha distillers, and of pitch, grease, lubricating oils, varnishes, sheep dip, creosote, asphaltum, asphalte and petroleum jelly manufacturers, and otherwise, now carried on at Upper North Street, Poplar, E.; to carry on the business of chemists and druggists, &c. The first subscribers are:—W. F. Rolfe, Burchester Street, Poplar; J. Smart, Stevenage, Herts; W. S. Duff, 32 Elchingham Road, Leyton; J. Grindley, Millfield, Highgate; V. Ramel, 36 Graham Road, Dalston; J. J. Patrick, 174 Burdett Road, E.; T. W. Holmes, 9 Westbourne Road, N. The number of directors shall not be less than three nor more than five, and the first shall be John Grindley, W. Bromley, J.P., Gravesend; W. F. Rolfe, and Josiah Smart. Qualification, shares of the nominal value of 100*l.*

THE GLASS BOTTLE INDUSTRIES (LIMITED).—In the registered articles of this company, of which full particulars are given in another page, it is stated that there shall not be less than five nor more than twelve directors. Qualification, 1,000*l.* The first are the Hon. Alan de Tatton Egerton, M.P., chairman; P. F. Mersey, C.E., deputy-chairman; W. A. Bevan, Dan Rylands, W. Breffit, W. Bagley, John J. Candlish, Barron Kilner, Elias Lyon, Thomas Turner, and Thomas Wood. The remuneration of the chairman of the board of directors shall be 750*l.* per annum, that of the deputy-chairman 500*l.*, that of each of the other directors who shall not be members of the works committee 400*l.* per annum, and that of each of the remaining directors 100*l.*, exclusive of all travelling and other expenses on the business of the company. In addition, the board, in each year in which a dividend exceeding 5 per cent. be paid on the ordinary shares, shall be paid an additional remuneration of 50*l.* for each 1 per cent. above such dividend. Such additional remuneration shall not exceed 250*l.* for each director, and shall be divided as the board may determine.

Legal Reports.

SELLING PATENT MEDICINE FORMULÆ.

A MOTION in the action of A. G. White & Co. v. Bridge was brought in the Chancery Division of the High Court, before Mr. Justice North on January 24, the plaintiffs applying for an interim injunction to restrain the defendant from giving away or causing to be given away any advertisements or publications representing that they contained an analysis of the ingredients used for making a compound known as "Mother Seigel's Syrup," of which the plaintiffs were the sole proprietors, or from making or compounding, or allowing others to make or compound, any preparation professing to be made according to a recipe said to contain the ingredients used for Mother Seigel's Syrup. Mr. Seward Brice, with whom was Mr. Emden, for the plaintiffs, stated that the plaintiffs were the owners of the patent medicine known as Mother Seigel's Syrup, and the defendant had been going about the country saying he had discovered the prescription of this and several other medicines, and had taken advantage of the plaintiffs' advertisements to make considerable sales in towns where Mother Seigel's Syrup was advertised. The defendant did not now appear, but had written from Leicester stating that he had withdrawn all his advertisements, as he was too poor to carry on the litigation, and that

the profits of the sales had not amounted to a 5*l.* note. His Lordship was of opinion that the plaintiffs were entitled to the order, and granted an injunction in the terms asked until the trial of the action or further order.

BANKRUPTCY REPORTS.

Re ROLAND FINCH, The Silvertown Chemical Works, Victoria Docks, E., Chemical Manufacturer.

THIS bankrupt attended a sitting of the London Bankruptcy Court last Monday, before Mr. Registrar Hazlett, for public examination upon accounts showing gross liabilities amounting to 28,187*l.* 13s. 5*d.*, of which 9,977*l.* 18s. is expected to rank against assets valued at 8,116*l.* 17s. Mr. S. Howell represented the official receiver, and Mr. Hatchett Jones appeared for the trustee under the proceedings.

Replying to Mr. Jones the bankrupt stated that he commenced business at the Silvertown Chemical Works in October, 1888. That was his first attempt to trade upon his own account, but he had been engaged in a similar business for years past. He agreed to pay 16,000*l.* for the business, but a valuation was made by Mr. Willoughby, of Plymouth, in which it was estimated to be worth 34,000*l.* A sum of 5,000*l.* was paid in cash, and the balance left on mortgage at 5 per cent. To enable him to pay the 5,000*l.* Mr. Jermyn advanced him various sums of money, and as security received a second mortgage upon the property. He knew a lot of people in the trade before he purchased the business, and received promises of support. For the first six months the business showed a return of between 9,000*l.* and 10,000*l.* A profit and loss account was made out showing the trading of the first twelve months, and that disclosed the fact that a profit had been made after paying all expenses and interest upon capital. The stoppage was caused by the action of Messrs. Bouillon, Flandrak & Co., his agents in France, who attached book debts to the amount of 3,800*l.* That firm sold goods for him on commission, and had a small claim against the estate in respect thereof. Some time since his agents, who had a chemical business in France, consulted him as to turning their business into an English company. He introduced them to the proper people and in due time the company was registered as the "English and Continental Chemical Company." The capital was to be 100,000*l.*, and he was to be appointed as managing director. He now thought that Messrs. Bouillon, Flandrak & Co. attached the debts in order to recover certain liabilities incurred in connection with that company. No process had been served upon him in respect of this claim, but he believed they were able, under the French law, to attach the debts first and make a case afterwards. Proceedings were now pending in the French courts, under which he sought to compel them to restore him the money they had received on his behalf. The bankrupt stated he kept a stock-book. One item therein showed 60 tons of bone meal. That had since been sold, and upon being drawn out it was found there were only 30 tons, worth 180*l.* The only explanation he could give of the discrepancy was that he took the stock over from his predecessor in business without having it weighed, and he believed the weights as given to him must have been inaccurate. The meal itself might have shrunk away to some extent, but not to the extent of one-half. With respect to certain articles claimed by his wife, they included six gold watches, which had been presented to his children by their grandfather. The furniture claimed consisted of articles bought by her at a previous sale by the sheriff. The debt of 25*l.* due to Miss Ophelia Stanbury was for money advanced by that lady about a year ago.

In reply to Mr. Howell, the bankrupt said he had no property of any kind, except that shown in the statement of affairs. With reference to the purchase of the Silvertown Chemical Works, the bankrupt admitted that at the time of the purchase his capital only amounted to 250*l.* The capital to be provided was 100,000*l.*, and he received promises of shares to be taken, sufficient to pay off all the mortgages. Mr. Jermyn advanced the money, with the object of turning the business into a company, and was to receive a bonus of 2,500*l.* from the share capital. Some acceptances were

made payable at 46 Queen Victoria Street, because he (the bankrupt) had an office there. He spent part of his time at Plymouth, as his parents lived there, but he had no interest in any house or furniture at the place.

Mr. Jones asked for the bankrupt to be ordered to amend the statement of affairs, by inserting details of the leases of all premises held, and adding the names of a few creditors that had been omitted.

The bankrupt promised to amend the statement in that way, and was then allowed to pass.

Gazette.

PARTNERSHIPS DISSOLVED.

Hey & Smith, Bradford, wholesale druggists and druggists.

Perken, Son & Rayment, Hatton Garden, E.C., and elsewhere, manufacturers and importers of optical and scientific instruments.

Thomas, J. J., & Son, Rookdale, chemists and druggists and aerated-water manufacturers.

Withers & Bratton, Shrewsbury, surgeons.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Heath, John Henry, Streasley Road, Willesden, late of Victoria Villas, Kilburn, and formerly of Clifton Hill, St. John's Wood, chemist's traveller.

Pedroza, John William, Sunderland, surgeon.

Taylor, George, Leeds, dentist.

FIRST MEETINGS AND PUBLIC EXAMINATIONS

Bettinson, William Thomas, Manor Road and Lewisham High Road, Deptford, chemist and dentist—first meeting, Feb. 5, 119 Victoria Street, Westminster, S.W.; public examination, Feb. 14, Court House, Greenwich.

Jones, Walter Robert, Birmingham, medical dispenser—Feb. 4, 25 Colmore Row, Birmingham; Feb. 6, County Court, Birmingham.

ADJUDICATIONS.

Heath, John Henry, Streasley Road, Willesden, late of Victoria Villas, Kilburn, and Clifton Hill, St. John's Wood, chemist's traveller.

Taylor, George, Leeds, dentist.

NOTICE OF DIVIDEND.

Stevenson, Robert Albert William, Brigg, veterinary surgeon—first and final div. of 5s. 3d., Feb. 1, Official Receiver's office, Hull.

APPLICATION FOR DEBTOR'S DISCHARGE.

Black, Walter Shaw, Bedale, surgeon—Feb. 22, Court House, Northallerton.

EXTRACTS FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision in the Act making any of these arrangements binding upon dissenting creditors.

Hall, Robert (deceased), by executor, late of Camborne, and Hall, Mary, of Camborne (widow and executor under the will of the late Robert Hall, deceased), chemist and druggist and grocer. Trustees: Thomas S. Lowry, Camborne, bank manager; Date, Jan. 24; filed, Jan. 25; unsecured liabilities, 1,727l. 10s.; estimated net assets, 521l. 14s. 2d.; creditors fully secured, 456l. No amounts given in schedule of creditors.

INFLUENZA has often been alleged to be the precursor of cholera, but medical authorities are agreed that there is no connection between the two.

LIVERPOOL CHEMISTS' ASSOCIATION.

THE eighth general meeting of this Association was held on Thursday evening at the Royal Institution, Colquitt Street, Dr. Charles Symes, president, in the chair. The annual report of the council was submitted by Mr. J. S. Ward, honorary secretary. It narrated the action taken by the Association and the resolutions arrived at in reference to the Pharmacy Acts Amendment Bill, the sale of medicated wines, and the railway rates inquiry. It claimed that the Association had been particularly active, and that some really good work had been accomplished. The publication of the new edition of the Liverpool chemists' price-list was also referred to. During the session four new members had joined, and sixteen names had been struck off the roll, leaving the strength of the Association at the present time 106. The financial statement presented by the honorary treasurer (Mr. R. Parkinson) showed a balance in hand of 13l. 7s. The retiring members of the council, Messrs. A. H. Samuel, T. F. Abraham, B. Dickins, C. Symes, J. R. Day, J. Hocken, and W. Wellings, were re-elected. A discussion "on the advisability of forming a trade committee" followed.

WILLS OF DECEASED CHEMISTS.

THE will of the late Mr. William Barnett, of Brighton, chemist and druggist, who died on March 26, 1889, has been proved at Lewes Probate Registry by Miss Sarah Barnett, the deceased's sister, and the Rev. Charles Masterson, the executors. To the latter the testator leaves 20%. The residue of his property, real and personal, he bequeaths to his said sister. The personalty amounted to 54l.

The will, dated August 2, 1883, of the late Mr. Alfred Hood Foster, of Birmingham, chemist and druggist, who died on July 22, 1889, has been proved at Birmingham Probate Registry by the executors, Messrs. James Alfred and Frederick Francis Foster, sons of the deceased. The gross value of the personalty amounted to 1,315l. 12s. 2d. The testator bequeaths his scientific books to his said sons; his stock-in-trade, fittings, and fixtures, together with the unexpired term of the lease of his business premises, he leaves to his son, Frederick Francis. He constitutes his executors trustees of his residuary estate, which he leaves to his widow and children.

The will, dated January 7, 1889 (with a codicil), of the late Mr. Henry D. Kimbell, of Knowle, chemist, who died on March 4, 1889, has been proved at the Birmingham Probate Registry by Messrs. Edwin Clutterbuck and Charles Kimbell, the executors. The gross value of the personal estate amounted to 3,272l. 13s. 2d. The testator, subject to a few small legacies, leaves his personal and real estate in trust to his executors for the benefit of his son Walter Frederick, under certain conditions, with remainder to his children, failing whom the estate is to revert to Mr. Edwin Clutterbuck absolutely.

The will, dated December 5, 1885, of the late Mr. James Slipper, formerly of Leather Lane, Holborn, and late of Brunswick House, Hampstead, chemist and druggist, who died on October 18, 1889, was proved at the principal Probate Registry on November 23, 1889, by Miss Marian Slipper and Mr. J. O. Slipper, two of the executors. The testator leaves all his property, real and personal, to his executors in trust for the benefit of his children. He empowers them to continue to carry on his business as long as they think fit, and to use such capital as they think necessary. The gross personalty amounts to 2,238l. 5s., and the net to 602l. 13s. 4d. Power to prove is reserved on behalf of Mr. J. S. Slipper, another son and executor.

Letters of administration of the personal estate of the late Mr. Daniel Dunbar Sutherland, of Totnes, chemist and druggist, who died intestate on April 5, 1889, have been granted at Exeter Probate Registry to Mrs. Jane Sutherland, the widow. The surties are Mr. W. R. W. Foot, chemist, of Totnes, and Mr. W. Downes, of Burgess Hill, Sussex. The gross personalty amounted to 1,809l. 5s. 9d., and the net to 872l. 0s. 10d.

THE DETECTION OF SODIUM IN LITHIUM SALTS.

By W. H. SYMONS.

THE salts of lithium were at one time frequently contaminated with those of sodium. In some recorded cases the proportion of sodium salt has exceeded that of lithium, and, justly or unjustly, these compounds are still regarded with some suspicion, hence a ready means of detecting sodium becomes a desideratum, the "flame test" being too sensitive to be of much service in giving any idea of the amount of impurity present.

Of the usual methods of analysis perhaps the best is that in which advantage is taken of the solubility of lithium chloride in a mixture of anhydrous alcohol and ether, to separate it from sodium and potassium chlorides, which are comparatively insoluble in that menstruum, and with careful manipulation and perfectly dry reagents good results may be obtained. The titration of the carbonate with an acid, or its conversion into sulphate as directed in the Pharmacopœia, together with the determination of its solubility in water of a known temperature, also furnish useful data, but with regard to the latter point it is easy to be misled by statements which do not apply to lithium carbonate as now commonly met with; for example, in the British Pharmacopœia of 1835 the solubility of lithium carbonate is given as 1 in 150, no temperature being mentioned. These figures may be approximately true for the temperature of boiling water, but for normal temperatures they are far from correct, Roscoe and Schorlemmer, quoting Kramers as their authority, say that "100 parts water at 13° C. dissolve 0.769 parts of this salt," about 1 in 130; and in the Pharmacopœia of 1867 the solubility is stated to be 1 in 100. My own determination on a commercial sample of ascertained purity gave results 1 in 68.9 at 15° C. Referring to other published statements, C. N. Draper (*Chem. News*, 55, 169) found the solubility at 15° C. to be 1.4787 per cent. (1 in 66.9), and F. A. Flückiger (*Arch. Phar.* (3), 25, 509-515) 1 in 70.72 at the same temperature, the differences perhaps being to some extent accounted for by variations in the method of preparing the salt.

The process which I suggest as the most ready means of detecting appreciable quantities of sodium in lithium compounds is based upon the facility with which lithium chloride dissolves in strong hydrochloric acid while sodium salts remain to a great extent insoluble.

The reliance which may be placed in this method is shown by the following experiments:—Dry sodium carbonate, 0.762 gramme, was treated with 10 c.c. strong hydrochloric acid (32 per cent.) in a dry vessel, the precipitated chloride thrown upon a small filter which had been previously washed with strong acid, the precipitate washed with another 10 c.c. and then dissolved in water, the solution evaporated to dryness, and the residue weighed, 0.783 gramme being obtained. If no sodium chloride had been dissolved in the acid the result should have been 0.8413 gramme. A mixture of sodium and lithium carbonates was then prepared, containing 0.755 gramme of the former and 2.0 grammes of the latter. It was treated as previously described, but in this case 40 c.c. of acid was used, and gave 0.621 gramme sodium chloride; had there been no loss it would have been 0.833 gramme. Thinking it possible that the acid might be considerably weakened by the evolution of carbonic anhydride a stream of dry hydrochloric acid gas was passed through the acid filtrate, but no further precipitate resulted.

These determinations show that while sodium chloride is not so insoluble in hydrochloric acid as to warrant quantitative determinations being based upon its insolubility, yet it affords a sufficiently delicate means of demonstrating the mere presence of sodium in the absence of other substances. Potassium and ammonium are not thrown out unless present in some quantity, but they are very readily detected by well-known methods.

To sum up, it may be stated that if 1 gramme of the suspected salt be treated with 10 c.c. of strong hydrochloric acid the presence of more than 2 or 3 per cent. of sodium carbonate will cause a distinct crystalline precipitate; or if 5 grammes of the salt be washed with 20 c.c. of hot water and the filtered solution evaporated to dryness, 2 or 3 c.c. of acid added to the residue will readily detect 0.5 per cent. of this impurity.

It is as well to note that at a red heat platinum vessels are gradually attacked by lithium carbonate, therefore if they are used the temperature at which the salts are dried should not exceed their fusing-point.

10 Ascham Street, Kentish Town, N.W.

FLUID EXTRACT OF COFFEE.

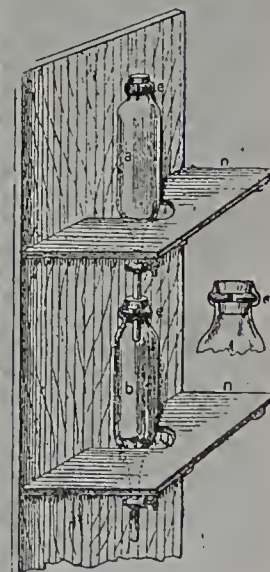
MR. G. H. CHAS. KLIE, being dissatisfied with the "National Formulary" method for making this extract, set about to find a better way, and this is it, as he reported it to the Missouri Pharmaceutical Association:—I took, he says, 2 lbs. avoirdupois of roasted coffee—about No. 30 powder—moistened thoroughly with 14 oz. of boiling water containing 25 per cent. of glycerine. The moistened powder was packed moderately tight into a percolator—glass or earthenware percolators are best—and the same menstruum, boiling water containing 25 per cent. of glycerine, was used for exhaustion. Look out for your glass percolator when you use this menstruum. However, if the glass is of good quality and has become evenly warm from contact with the hot moistened powder no break need occur. With a metal percolator no extra care is necessary. The very best percolator for this process is one with a jacket in which the menstruum can be kept hot during the whole operation. But this is not indispensable. The first 28 oz. of percolate are placed aside as finished extract, and percolation is continued until three percolates, each 32 oz., numbered respectively 1, 2, and 3, are obtained, when the coffee should be practically exhausted. [Experiments have shown that it is.] These three percolates are used successively for the next 2 lbs. of coffee, and so on indefinitely, or until you stop making the fluid extract. To prevent the reserve percolates, 1, 2, and 3, from spoiling I evaporate until only the glycerine containing the extractive matter is left. This is used in the next process in the same proportion as when pure glycerine is used.

This extract makes excellent coffee. The colour may be darkened by adding a drachm or two of bicarbonate of soda to the boiling water.

RE-PERCOLATION.

THE annexed figure shows an arrangement suggested by Ungerer for the process of re-percolation. A number

of percolators, *a*, *b*, are placed on a suitable stand, one above the other, so that the tube of one percolator passes through a cork fitted into the mouth of the one below. From six to twelve of these vessels may be used one above the other. The stand consists of a board with pairs of projecting pegs placed at such distances that there is room for the cylinders between them. Boards having a horseshoe-shaped piece cut out on one side are placed on these pegs, and serve to support the cylinders in their places. The menstruum is allowed to run into the top cylinder, either freely or (in order to increase the pressure) through a long tube attached to the top. The liquid permeates the substance in the cylinder and runs through into the cylinder below, and so on to the bottom, where it is drawn off as the strongest possible tincture. By adjusting the lowest stop-cock the speed of flow can be properly regulated. The number of vessels and the speed of percolating should be so regulated that the tincture begins to flow from the lowest cylinder just when the contents of the top one have been thoroughly exhausted. As soon as the top cylinder is exhausted it is removed, the whole column of vessels raised up a stage, and a newly-filled vessel is added at the bottom. In this way the process becomes continuous, and a concentrated extract can be made, except, of course, towards the end of the operation.



Scientific Notes :

On Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.

CLARKE'S SOAP TEST.

Mr. F. E. NELSON suggests that this solution can be made in the following manner:—Dissolve 1 gm. of pure palmitic acid in a small volume of pure spirit, and neutralise with 4 c.c. normal soda solution (calc. equiv., 3.9 c.c.). This volume of soda solution is equivalent to 4×50 mgrms. CaCO_3 , and is therefore diluted to 200 c.c., adding so much aqueous spirit that the percentage of alcohol in the standard solution amounts to 35. The solution gives constant results.

IMPURITIES IN ALCOHOL.

WORKING with the permanganate test, Cazeneuve uses as a standard of comparison pure alcohol of 93° and a 1 in 1,000 potassium permanganate solution; 10 c.c. of the standard alcohol at a temperature of 15°–20° requires five minutes to give with 1 c.c. of permanganate a slightly yellowish rose tint, indicating that the reduction is not quite complete. An ordinary alcohol of 93°, under the same conditions, exercises a much more rapid reducing action, and this increased rate of action indicates impurity.

A NEW ALKALOID.

Mr. J. TSAWOO-WHITE reports to the *Chemical News* the discovery, during an analysis of some food supposed to be poisoned, of an alkaloid giving a purple colour with sulphuric acid and oxidising agents, the reaction being quite the same as that supposed to be peculiar to strychnine and curarine. This substance differs in some respects, however, from these alkaloids. It is slightly yellowish, amorphous, almost tasteless, and not bitter. It dissolves in water, alcohol, and in ether, giving the usual reactions with alkaloidal precipitants, such as Mayer's reagent.

BETEL-OIL.

THE dried leaves of *Piper betle* yield on distillation 0.5 per cent. of oil, sp. gr. 1.024 at 15°, containing 70–75 per cent. of a phenol which Bertram and Gildemeister have isolated by shaking with dilute aqueous soda, and decomposing the sodium compound with sulphuric acid. The product is *betelphenol*, $\text{C}_{10}\text{H}_{12}\text{O}_2$, a colourless, highly refractive oil of characteristic odour; boiling at 254°–255°, and of sp. gr. 1.067 at 15°. It has the same empirical composition as eugenol, but gives a greener colour with ferric chloride. It also differs from the phenol (chavicol) obtained by Eykman from the oil of the fresh leaves. The portion of the betel-oil not affected by alkali distilled for the most part between 250° and 275° as a yellow liquid smelling like tea, and yielded crystals of a sesquiterpene dihydrochloride, $\text{C}_{15}\text{H}_{22}\text{2HCl}$.

VALUATION OF INDIGO.

FROM 5 to 8 gramme of the finely-powdered sample is mixed with about 2.5 grammes of finely-divided dry pumice-stone. The mixture is brought into a Zulkowsky-Wolfbauer extraction apparatus (a kind of Soxhlet), covered first with a layer of powdered pumice-stone, and then with cotton-wool. The extraction is performed with 50 c.c. of anhydrous aniline or nitro-benzol, and is generally completed in an hour. If thought necessary, the mass may be removed from the apparatus, washed with alcohol, dried, powdered, and extracted a second time. The solution is distilled off to recover the aniline, but it is impossible to carry the distillation to dryness on account of bumping. The contents of the retort are therefore emptied into a little graduated measure, when the volume must be carefully noted. About five times the volume of absolute alcohol is now added, the precipitated indigotin collected on a weighed filter, washed with alcohol until washings are almost colourless, dried at 110° C., and weighed. To the weight obtained must be added .013 gramme for every 10 c.c. of aniline left, or .021 gramme if nitro-benzol has been used. On the whole Mr. Honig, who has devised this process, prefers using aniline. The indigotin must, of course, be tested for sandy matter.—*The Analyst*.

PREPARATION OF ALKALINE NITRITES.

Lc Roy makes these by mixing the finely-powdered alkaline nitrate with finely-powdered barium sulphide in the proportion of 4 molecules of the former to 1 of the latter. The mixture is heated with constant stirring in an iron basin to dull redness. The reaction takes place with incandescence, and on extracting the cooled mass with water the nitrite dissolves, and barium sulphate is left, and can again be reduced to sulphide. The presence of sulphate in the sulphide moderates the reaction.

ASSAY OF CANTHARIDES.

NAGELVOORT proposes a modified method, of which *The Analyst* gives the following particulars:—10 grammes of cantharides are moistened with a 10-per-cent. soda ley, and put in a warm place for six hours. The mass is now acidified with hydrochloric acid, transferred to a Soxhlet's tube and fully exhausted by means of chloroform (about 50 c.c.). After evaporating off the chloroform, the residue is freed from fat by means of carbon disulphide, and then redissolved in chloroform. The liquid is filtered off and evaporated to dryness at 79.5° C., when the cantharidin may be weighed.

ESTIMATION OF SUGAR BY FEHLING'S SOLUTION.

H. CAUSSE suggests the addition of 4 c.c. of a 5-per-cent. solution of potassium ferrocyanide and 20 c.c. of water to each 10 c.c. of Fehling's solution employed. On running in the sugar solution to the boiling mixture the potassium ferrocyanide dissolves the cuprous oxide as quickly as it is precipitated and forms a colourless solution, thus rendering the exact point of decolorisation more easily seen, and preventing bumping. Potassium ferrocyanide appears to be without action on hot or cold Fehling's solution. On cooling the liquid obtained, after titration, it turns brown, and deposits colourless crystals, which the author intends to study.—*Journ. Chem. Soc.*

WALLACH ON SOME ESSENTIAL OILS.

INVESTIGATIONS recently made by O. Wallach show that oil of laurel, obtained from the leaves, contains small quantities of pinene and cineol. The oil of laurel obtained from the berries has a similar composition, and neither contains the laurene of Brühl. Oil of elemi contains, besides phellandrene and dipentene, large quantities of higher boiling products, consisting of polyterpenes, and probably also of compounds containing oxygen. In fractionating this oil the presence of a crystalline compound was repeatedly observed; this is probably closely related to the amyrrin investigated by Vesterberg. A sample of Brazilian resin which Wallach examined contained such a large quantity of amyrrin that crystals of the compound could be obtained by recrystallising once from ethyl acetate.

MAKING QUININE IN INDIA.

SOME time ago we described the process for manufacturing quinine which Mr. Gammie has introduced in India under Government sanction. Mr. C. H. Wood, the quinologist, and at one time editor of the "Year-book of Pharmacy," now informs the *Englishman* that he was the discoverer of the cold-oil process. We gather from his paper that he commenced to use "fusel oil" for the extraction of the alkaloids of cinchona as far back as 1873, and after using it for some time it struck him that the addition of a liquid hydrocarbon would exclude some of the impurities taken up by fusel oil alone. Accordingly, he tried a mixed solvent formed by diluting the fusel oil with five or six times its volume of the volatile portion of coal-tar naphtha. The use of a volatile naphtha, whether derived from coal, shale, or petroleum, for diluting the fusel oil, presented several advantages for a manufacturing process; but as there would be great difficulty in obtaining such naphtha in India, Mr. Wood next tried ordinary kerosine, as this is so largely used for illuminating purposes in India, and the results were quite up to his expectations. He adds that he communicated the principle of the process to Dr. Redwood, one of the editors engaged in preparing a new Pharmacopœia, as likely to furnish the basis of a convenient analytical method for determining the alkaloidal value of the cinchona bark used in medicine, and the process is now the official test for that purpose in the present British Pharmacopœia.

A HOSPITAL DRUG ACCOUNT.

WE are indebted to Mr. George Robertson, F.C.S., chemist to the London Hospital, for a copy of the dispensary account of the hospital for the year ending December 31, 1889. The year appears to have been a very busy one at the hospital, for the amount spent (7,090l. 9s. 8d.) in drugs, chemicals, wines, spirits, plasters, and sundries is larger than it has been for 7 years past. Drugs and chemicals came to 3,858l. 5s. 4d., wines 83l. 10s. 5½d., spirits 425l. 7s. 7d. (brandy alone 345l. 3s.), plasters 290l. 15s. 2d., and the remainder on sundries, which include all the surgical appliances, invalids' foods, bottles, &c.

In our description of the dispensary of this hospital we gave some examples of the extent of the consumption of certain drugs. It is interesting to note how the quantities fluctuate from year to year. In some cases increase is doubtless due to increase in the number of patients, but in others it is the effect of greater confidence in the medicines. The accounts also show in a striking manner the cheapness of medicines during 1889. For example, 208 lbs. of gum acacia cost 21l. 4s. 9d., as compared with 55l. 17s. 8d. for 304 lbs. in 1888; 44 oz. of cocaine hydrochlorate cost 39l. 2s. in 1889, and 55l. 4s. 4d. for the same quantity in the year before. Quinine shows an equally great decline. We remarked, when treating of the 1888 account, that the quantity of chloral hydrate used in the hospital seemed to be very small—it was only 14¾ lbs. It is astonishing, therefore, to find a further decrease, viz. to 9½ lbs. Sulphonal, meanwhile, has found a place in the list, figuring for 74 oz. Of other new remedies, antipyrin seems on the upward way, the consumption having increased from 217 oz. to 350 oz.; but hematin sulphate beats this in one sense, the amount used in 1889 (649¾ grs.) being more than double that which was utilised the year before. Strange to say, there was a fall in ext. cascara sagrada by a few pounds, while the older-fashioned, and, some think, better, conf. sennæ was much more used. There was little change in the consumption of other aperients. We note that ichthyol was much more extensively used, the comparison between the two years being 4 lbs. and 18 lbs.; lanoline, on the other hand, declined from 123 lbs. to 35 lbs., while vaseline increased from 3,067 lbs. to 3,750 lbs. The use of menthol cones was also greatly extended, viz., from 30 to 66 dozen. As most galenic preparations are made in the dispensary we find only two tinctures in the list, viz., strophanthus 9 lbs., and Warburg's 7 lbs. There was a large decrease in the use of salol (from 12 to 2 lbs.) and sodium salicylate (119 to 91 lbs.), but, as we do not find any new substitute for them in the list, we presume that the cases, requiring their use were not so numerous. It is always an interesting thing to watch the growth or otherwise of antiseptics used in surgery. For instance, the opinion has been spreading within the past year that corrosive sublimate, active as it is in exterminating germ life, is apt at times to produce symptoms in the human subject which are not altogether free from danger. So far as the London Hospital is concerned the evidence of this is somewhat startling, for while 4,082 yards of sublimate gauze were used in 1888, there was a fall to 2,066 yards in 1889, while almost twice as much carbolic gauze and boric lint was used than in the year before, boric acid itself also jumping up from 978½ lbs. to 1,190¼ lbs. There was also an increased consumption of iodoform (from 196 lbs. to 244 lbs.), and a great decrease in linseed meal—3 tons as compared with 5 tons in 1888. Considering the account as a whole, the principal fact which strikes us is the eminently conservative character of the therapeutics. New remedies may be employed more extensively than the account shows, for these are bought in such small quantities that they are classed with sundries; but the drugs which form the staples are old and well-tried remedies. Inferentially, therefore, experimenting can only be carried on to a most meagre extent. This is a comforting deduction, which doubtless could also be drawn from an examination of the drug accounts of any of the principal London hospitals. Is it not possible for them to follow Mr. Robertson's excellent example?

TESTS FOR TINCTURES.

THE tests usually given for tinctures are confined to their physical properties, such as colour, odour, and taste, but for many purposes it may be desirable to possess chemical tests as well, and for that purpose L. von Hallie gives the following in the *Apotheker Zeitung*, which our contemporary the *American Druggist* abstracts:—

Tinctura Aloes.—Ether shaken with this tincture and afterwards treated with caustic ammonia will show a reddish-violet coloration.

Tinctura Calumbæ.—The [yellowish-green residue, after evaporation of the tincture, is dissolved in dilute hydrochloric acid. A few drops of bromine or chlorine water added to this solution produce a pink colour on heating the mixture.

Tinctura Cinchonæ.—Thirty minims of the tincture are mixed with liq. plumbi subacet., filtered and evaporated. The residue is dissolved in water, a few drops of sulphuric acid are added, and the whole is filtered. The solution should give the thalleioquin reaction with bromine water and ammonia.

Tinctura Colchici.—Forty-five minims of the tincture are evaporated; the residue is dissolved in water, filtered, and the filtrate shaken with chloroform; the latter is removed by evaporation. The residue on addition of nitric acid becomes first violet, then brown, and, if some caustic potash is added, orange coloured.

Tinctura Colocynthis.—Thirty minims of the tincture are evaporated; the residue is taken up by ½ drachm of water and filtered through a moist filter. The filtrate is evaporated, when the residue will show a deep red colour on addition of concentrated sulphuric acid, which colour will change into a lighter cherry red on addition of molybdate of ammonia.

Tinctura Digitalis.—Seventy-five minims of the tincture are evaporated; the residue is dissolved in ½ drachm of water, precipitated with liq. plumbi acet. and filtered, agitated with chloroform, and evaporated. The residue shows a violet reaction on the addition of sulphuric acid and bromine water.

Tinctura Gelsemii.—Fifteen minims of the tincture are evaporated to dryness; the residue is filtered together with 15 minims of acidulated water, then mixed with a little liq. ammoniac, and agitated with chloroform. After evaporation of the chloroform gelsemine remains, which, with sulphuric acid and bichromate of potassium, gives a reddish-violet colour. The liquid, after having been agitated, may be diluted with water, when it will show blue fluorescence.

Tinctura Guaiaci gives a blue colour with oxidising agents. Sulphate of copper and bitter-almond water produce the same colour.

Tinctura Ipecacuanhæ.—The residue after evaporation is dissolved in a small quantity of acidulated water, the solution filtered, made alkaline with caustic potash, and agitated with ether. The residue after evaporation of the ether turns brown on addition of a concentrated solution of molybdate of ammonia in sulphuric acid; it turns into a lovely blue on the addition of one drop of hydrochloric acid added to the whole.

Tinctura Jalapæ yields a residue after evaporation, which is turned red by addition of sulphuric acid.

Tinctura Nucis Vomica.—After evaporation the residue is dissolved in water, the solution filtered, made alkaline, and agitated with chloroform. After evaporation of chloroform, the residue is coloured red with nitric acid, violet with sulphuric acid and bichromate of potassium.

These are simple but ingeniously arranged tests, and it is possible to devise more of the same kind.

IN THE UNITED STATES there are said to be 27,651 druggists and 71,461 doctors.

AN "Elements of Pharmacy" has just been published in Chicago, of which a critic has found it necessary to say, "There need be no fear that the lustre of the authors' 'check' will be in the least dimmed by the discovery that whole pages from Attfield's 'Chemistry' have been copied without as much as even hinting the origin."

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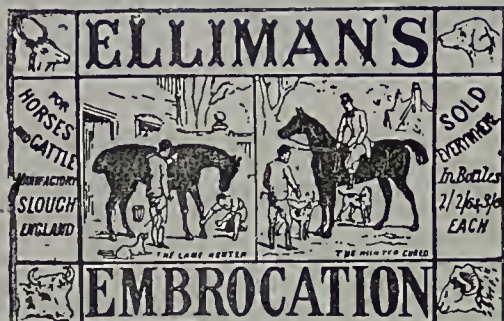
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EDITORIAL NOTES.

INACCURATE DISPENSING.

WE reported last week three convictions of chemists under the Sale of Food and Drugs Act for inaccuracies in dispensing simple prescriptions. Those cases were reported from Doncaster, Huddersfield, and Selby. We have since received particulars of another case, heard at the Bradford Police Court. This is reported this week. In the Doncaster case 219 grains of bicarbonate of potassium were dispensed instead of $\frac{1}{2}$ oz. of iodide of potassium, and hard water had been used instead of distilled water in the preparation of the chloroform water of the prescription. The result was a fine of 5*l*. including costs. The Huddersfield case was that 120 grains of citrate of iron and quinine were dissolved in plain water instead of chloroform water as ordered. Fine, 1*l*. and costs. The Selby chemist made up his mixture to 14 oz. instead of to 12 oz. as directed, and, besides, some sulphuric acid had some-

how got into the mixture, and had, we suppose, decompounded the iodide. The charge for this was 20s. fine and 21s. 9d. costs. The chemist at Idle, near Bradford, had to supply some citrate of iron and quinine in 12 oz. of chloroform water. His mistake seems to have been to give 8 oz. of water instead of 12 oz. The magistrates were lenient in this case, and let the defendant off on payment of costs.

We have made some inquiries about the investigation into dispensing which has evidently been proceeding, and we have ascertained that in all forty-four bottles of medicine were obtained, and that of these eight were declared by the analyst to have been incorrectly dispensed. Two gave 8-oz. mixtures, one gave 10½ oz., and one gave 14 oz., instead of the 12 oz. ordered; one gave 160 grains of citrate of iron and quinine instead of the 120 grains ordered; one added some glycerine without authority (it is possible that in this case a solution of the citrate, with some glycerine added to keep it, had been used); one added dilute sulphuric acid; and one gave bicarbonate instead of iodide of potassium. Besides these, we have heard that one chemist snatched the mixture he had made from the inspector's hands; and our Sheffield correspondent tells us of another who had so little confidence in his drugs that he sent to a wholesale druggist for the drugs ordered, saying they were for analysis; while another, recognising his customer, would not venture on the work of dispensing a simple mixture for less than two guineas. Lastly, we have information concerning one pharmacist who told the inspector that he could not supply the ferri and quiniæ citras of the prescription, but that he could give him some citrate of iron and quinine instead, which would do as well.

These statements are not all proved, and perhaps are not all strictly accurate. But taken all together, and with confidence in those that have been established in courts of law only, we have no hesitation in declaring the revelation to be disgraceful. It looks as if not more than three chemists in four (in the Yorkshire district) can be relied upon to dispense a simple prescription with absolute accuracy; it seems certain that one in ten or eleven cannot be so depended on. This is a far larger proportion of incompetent, careless, or dishonest dispensers than we should have assumed in any part of the country, and they do infinitely more than the *pro rata* degree of mischief indicated by the figures. So long as anything like these results appear, such raids as the one we are reporting are justifiable; and competent and trustworthy pharmacists, as well as the public, are in reality indebted to Mr. Allen for this important though unwelcome demonstration of the unsatisfactory condition of pharmacy in the districts where he is public analyst.

SYNTHETIC MUSK.

IN the spring of last year it was first announced that two German chemists, Messrs. Schaeffer and Hupfeld, had patented a process for the synthesis of the odoriferous principle of musk. According to the process patented by these two scientists, the synthetic musk was obtained by treating meta-xylol and isobutyl alcohol with chlorate of zinc and rectifying part of the resulting hydrocarbon. The product appeared in the form of a red-brown oil, which, when washed with water and rendered slightly alkaline, was ready for use. Nothing further was heard of the matter for several months, when a few Continental drug houses succeeded in obtaining small samples of a synthetic musk, which, however, was not available in commercial quantities. These samples presented the appearance of yellowish needle-

crystals, possessing a pure and strong odour of musk, but by no means equal to pure Tonquin musk in intensity. At the time these samples were regarded by their recipients rather as chemical curiosities than as articles of any present or future commercial value. The next link in the chain of events was reached in December last, when it was stated, with some appearance of authority, that a French firm or syndicate of perfumers had acquired the patent rights of the German inventor of "synthetic musk" for a large sum, and that the article was about to make its appearance on the markets of the world. Strange to say, no further mention was made of the two chemists whose names were connected with the discovery in the first instance, but the name of the inventor was given alternately as Dr. Bauer, of Erfurt, and Dr. Baner, of Gispersleben. Up to the present moment, in fact, it is not quite clear whether all the reports refer to the one product which has now been placed on the market, or whether there are two or more German inventors, only one of whom has been dealt with by the French syndicate.

Be this as it may, there is no doubt whatever that the appearance in commercial circles of "synthetic musk" has created a momentary scare among importers and dealers in the natural article, and it is no exaggeration to say that for several weeks the musk trade has been practically at a standstill. Buyers were unwilling to invest in a commodity at considerably more than its weight in gold until they should have some guarantee that the costly drug will not be liable to sudden depreciation, and the houses connected with the China trade refused, for the same reason, to enter into any arrangements for further imports of what they feared might prove an unsaleable article.

In some quarters, perhaps, this period of suspense may continue for a short time, and we will, therefore, endeavour to throw some light on the position and prospects of the new product. From the information which we have been able to collect in this country and in Paris, it appears to be a fact that the manufacture of the "synthetic musk" has passed under the control, if not of a French syndicate of perfumers, at any rate of a few French firms in the chemical and essential-oil trades. So far as we can gather, the first person whom the German inventor approached was M. Kestner, a well-known member of the French Senate. M. Kestner is an Alsatian by connection (closely allied, by the way, to the Ferry family), and we understand that he is interested in a chemical factory in the neighbourhood of Mulhouse, out of which works the first few sample lots of "artificial musk" have been brought into commerce. M. Kestner associated with him in the venture a fellow-senator, M. Antoine Chiris, who, as a large distiller of essential oils in the South of France, is an expert on matters relating to perfumery, and since then we believe a third party has been added to the syndicate, in the person of the head of the well-known Paris chemical works who were the first to bring into the market the synthetic vanillin, which since its origination, some twelve or fifteen years ago, has replaced vanilla in many departments, though, to be sure, it has not been able to supersede that article altogether.

The fact, then, that an essential-oil grower and practical perfumer of repute and a firm who are already able to point to the successful introduction of a product probably closely allied to the synthetic musk, have sufficient faith in the latter article to identify themselves with it, is certainly *prima-facie* evidence that the new-comer is destined to create some stir in the future. We have secured a sample of the new compound, part of which we have submitted to certain experiments, while we have distributed a portion to a few wholesale perfumers with the request that they should

put its efficiency to a practical test. The new product appears in minute glistening white crystals. Its odour (which the inventors claim to surpass that of true musk in intensity several times) is remarkably powerful and durable, but it is not exactly that of true Tonquin musk—certainly no experienced perfumer would confound the two. When smelled faintly, however, it is of a character decidedly akin to musk, and to the general public the two would probably be the same. We need not say that the new product is a coal-tar derivative, obtained from toluol as the starting-point, though by what precise process is, of course, only known to the manufacturers. Our experiments point to the probability

that the article is a member of the class of aromatic bodies of which vanillin and saccharine are typical samples. The sample which we tested dissolved readily in rectified spirit. A 1-per-cent. alcoholic solution is not in itself of a musky odour, but upon diluting this solution with water the musk odour develops strongly, and remains distinctly perceptible up to 1 in 50,000. Solutions ranging in strength from 1 in 100,000 up to 1 in 720,000 still have a perceptible odour; but in these weak solutions it is not possible to say for certain that the odour is that of musk. The 1-per-cent. alcoholic solution diluted with water to 1 in 2,000 is opalescent, but when further diluted to 1 in 36,000 it gradually becomes clear, and the musky odour appears to gain in intensity up to this point.

Upon diluting a 1-per-cent. alcoholic solution with water to 1 in 3,000, and adding caustic soda to four times the weight of the "musk," the appearance of the solution remained unchanged, *i.e.* opalescent. But after boiling the opalescence disappeared, and, in contrast with the non-alkaline solution, the musk odour became much more intense, and appeared to gain in the course of thirty-six hours. Similar treatment with sulphuric acid resulted in the precipitation of the "musk" in the form of needle-shaped crystals about $\frac{1}{8}$ inch long. This solution only possessed a very feeble musk odour, due, no doubt, to the fact that the odoriferous body had crystallised out. The alcoholic solution was neutral to test-paper. A drop of it placed on blue litmus paper left no stain when the alcohol was dispelled by heat, but upon exposure to the air for a few hours a faint red spot appeared. It is probable that the body is of the nature of an acid, but although our observations point to this conclusion, they are not sufficiently definite. Mixed with a solution of otto of rose in the proportion of ten of otto and one of musk, and diluted with water, the rose odour predominated at first, but when more water was added the musk began to develop distinctly.

The behaviour of the new product with caustic soda would seem to indicate that it could be used as an ingredient in the manufacture of toiletsoaps without destruction of the odour by the alkali. Of course, the crowning test of the value of the article can only be obtained by time, and as the musk has only been obtainable for a few weeks, the wholesale druggists and perfumers who are now experimenting with it cannot yet give a definite opinion as to its merits, though in one or two English quarters we have heard views expressed which are the reverse of favourable—one of our informants assuring us that the alcoholic solution turns acid, which, if correct, would prove an insuperable obstacle to its use in perfumery.

It is among Parisian perfumers and druggists, however, that the article has been subject to the most thorough experiments so far, and inquiries in that city broadly show that the perfumers are not dissatisfied with the present results of their tests, though they speak in guarded terms, and are careful to point out that time only can show whether the perfume possesses the supreme qualification of permanency.

On the other hand, the wholesale druggists generally refer to the compound in terms of some disparagement, and, at any rate, have very little to say in its favour, while the importers of musk profess themselves confident that the new product will not sensibly affect the price or the consumption of the better grades of the natural article, though they admit that for some weeks their trade has been at a standstill. The manufacturers of the article and their selling agents are very unwilling to give any information of any value, and appear to think that for the present their best policy is one of mysteriousness, if not of mystification. The wholesale price of the new product is at present from 2,500f. to 3,000f. per kilo., or from 60s. to 70s. per oz., which is rather more than half the price of the finest Tonquin grain musk. One of the French perfumers assures us that he has found the artificial article to be about 25 per cent. cheaper in use than natural musk, which would scarcely bear out the claim of the manufacturers that their product is more powerful than natural musk. Probably, if such a course should become necessary, the manufacturers would be able to reduce their quotations considerably, and yet retain a good profit; though there is no reason why they should lower their price except under compulsion, as musk is not an article the consumption of which would be increased to any large extent by cheapening it. But though the initial cost of the toluol and other materials which may be used in the manufacture is probably not considerable, and most of the ether or other solvents which may be employed is probably recoverable, yet the possible requirement of expensive plant and the cost of labour may constitute items of some importance in the manufacture of the article.

We do not think that, even assuming the artificial article to be all that its inventors claim for it, the demand for good natural musk is in danger of disappearing. The probability that the synthetic product will be useful in the manufacture of toilet soaps, of waters, and perhaps of the cheaper kinds of perfumery, may depress the market price of natural musk to some extent, and it would not be altogether a calamity if it caused the commoner varieties of Indian grain musk and the lower classes of pod musk, which now form a standing feature of the drug auctions, to disappear. But the best Tonquin musk is not an article which is likely to lose its hoary prestige upon the first assault of the latest child of coal-tar chemistry. It must not be forgotten that a very large proportion of the best musk is used by perfumers of the highest standing in the preparation of scents of world-wide fame. Although musk is dear, yet the temptation to buy an untried substitute at half its price would probably be no inducement for the best perfumers to abandon the tried ingredient, especially as the cost of even the best musk is probably not a serious factor as compared with the cost of, say, alcohol in the manufacture of the finest perfumery. By this we do not mean to imply that there may not be a large field open for the new product, but at the same time we do not see any ground for a sudden and alarming depreciation in the price of the best natural musk.

UNQUALIFIED SELLERS AND COMPANY DRUGGISTS.

WE hear from Birmingham of an extraordinary display of energy on the part of the Pharmaceutical Society. In that city, as in other large towns, considerable drug businesses are conducted by limited companies, and we are informed that the Pharmaceutical Society are demanding penalties from persons occupied in three such businesses in Bir-

mingham. Poisons are alleged to have been purchased in these shops from unqualified owners, assistants, and apprentices. At one, five distinct purchases of the kind are said to have been effected, at another six, and at another eleven. In all three, twenty-two penalties of 5*l.* each have been claimed. One firm has, we believe, paid up; of the intentions of the other two we are as yet ignorant. We understand that qualified chemists are employed in all the establishments; but we presume the Society's representatives are prepared to offer evidence showing that the sales in question were conducted by persons not on the register of chemists and druggists. All these cases are, of course, based on the interpretation of the term "seller" in the 15th section of the Pharmacy Act, 1868, set forth by the judge of the Wandsworth County Court. There may or may not be some special defence in regard to some of the alleged offences, but if proved, the County Court judge who will have to hear the cases will have no option of reducing the penalties, and the Society will scoop in 110*l.* from the defendants in those three establishments alone.

If this is a correct statement of facts, and if this attack is made on the company druggists alone, or specially, as appears to be the case, then we unhesitatingly assert our opinion that the proceedings are indefensible and discreditable. The Pharmaceutical Society is entrusted with a certain exceptional power, to be used (if the legally accepted theory of the poison "seller" be correct) for the purpose of ensuring to the public a certain degree of competence on the part of the persons authorised to supply these dangerous articles. They have admittedly neglected their trust in regard to the unqualified seller for many years. Whether they are to blame or not for that neglect is not the present question; but all will admit that if they resolve to exercise the powers entrusted to them, these should be used with strict impartiality, with discretion, and with some degree of moderation. To keep a law in abeyance for twenty years, and then to suddenly swoop down on a man for eleven penalties is neither moderate nor fair. And the position is not improved from the point of view of honour when it is remembered that, so far as we know, the persons attacked are all representatives of a class with which the Society has another feud. There may be some chemists who will applaud this attack on the company druggists as a fair return for what they regard as their illegitimate competition. But we are confident that the majority will prefer that such opponents should be fought fairly. We have ourselves steadfastly advocated that the right of "qualification by incorporation" should be openly challenged in Parliament. If the Society will not take this step they must accept the position which has been declared to be legal. But it is neither justifiable nor prudent to seek to compass a trade advantage, unattainable in the law courts, by means of the administration of a public law.

MASSOI OIL.

THIS oil, which was first distilled by Schimmel & Co. from a bark brought from New Guinea, has been subjected to a crucial examination by Dr. E. F. R. Woy. As previously stated (*THE CHEMIST AND DRUGGIST*, April 13, 1889, page 524), Mr. E. M. Holmes has questioned if the massoi bark which Schimmel & Co. have operated upon is the same as that to which Beccari gave the name *Massoia aromatica*. It so happens that twenty years ago Bonastre examined the oil obtained from that bark, finding in it three principal constituents—a light and a heavy oil with the odour of sassafras, and massoi camphor, a white powder heavier than water. Dr. Woy's results differ from these, and he believes that the oil which he has examined is not identical

with Bonastre's oil, thus confirming Mr. Holmes's conclusion. Dr. Woy's paper, as printed in the *Archiv der Pharmacie*, is one of great length, but of much interest, and in view of the probable employment of the oil in the future, we give the chief points which have been determined. It is well to note here that in some respects the oil resembles oil of cloves, and may become a substitute for it. It dissolves readily in alcohol, ether, petroleum ether, and glacial acetic acid, and with more difficulty in chloroform. Its specific gravity at 10° C. is 1.0514 and at 13° C. 1.0504. Its specific rotatory power is + 2° 45' [a_D]. The oil readily gives the eugenol reaction. Analysis yielded the following constituent bodies:—6 per cent. of a terpene, $C_{10}H_{16}$, sp. gr. 0.8619 at 13° C., 0.8581 at 18° C.; specific rotatory power + 40° 20', and boiling-point 172° C. To this body Dr. Woy gives the name "massoyene," and gives reasons for showing that it is not identical with limonene, the terpene which it most closely resembles. The second body isolated was safrol, $C_{10}H_{16}O_2$, sp. gr. 1.0713 at 20° C., and the third, constituting at least 80 per cent. of the oil, was eugenol, $C_{10}H_{12}O_2$, sp. gr. 1.0719 at 15° C., boiling at 247° C., and giving a dark blue colour with ammonia, these characteristics showing that the body differs from isoeugenol and betelphenol, its isomers. There was still obtained from the residue of the oil a phenol or creosote-like body (10 grammes from 3 kilos. of oil), which gave a green reaction with ferric chloride. The residue appeared to be altered eugenol. The paper gives full working details, results, and comparative statements, which are intended to substantiate the author's conclusions. These show that the oil is one of unquestionably high value, and its close similarity to oil of cloves suggests its use in the place of that oil for microscopic and other purposes, and as a source of eugenol. But since it has been so clearly shown that the bark from which it is distilled is not true Massoi bark, it seems inadvisable to continue the association of that name with it.

COMMENTARY.

PHARMACEUTICAL SOCIETY *v.* WHEELDON.—We understand that the appeal in this case may be reached in the High Court in the course of next week. We are pleased to state that Mr. Thomas Howell Williams, member of the London County Council, and head of the firm of Idris & Co., Kentish Town, London, N.W., has consented to associate himself with Mr. M. E. Foster, of 50 Bishopsgate Street, E.C., in superintending the expenditure of the money contributed towards the expenses of an appeal in the above case, and we have handed to Mr. Williams all the sums sent to us for this purpose. Gentlemen who have promised amounts, and others who may still wish to assist, should send their contributions to either Mr. Williams or to Mr. Foster.

PEARS' SOAP AND COLONEL NORTH.—We have authority for saying that the paragraph in the newspapers that Pears' soap is to be floated by Colonel North with a capital of 1,500,000*l.* is without foundation. Such a business requires no promoters of any kind, and Mr. Barratt is not likely to yield the helm of the ship he has so long and successfully steered to anyone.

"CHLOROFORM, it appears, may now be administered without risk." "This great gain to science and to suffering humanity has been brought about by the liberality of the Nizam of Hyderabad." These are actual quotations and fair specimens of the paragraphs which have grown out of the

recently-published records of the Hyderabad Commission, and they illustrate the way legends grow. We have yet to learn whether anything new has been discovered, or that the risk of administering chloroform *carelessly* has been diminished in any degree.

THE REVISED DOCK TARIFF.—Mr. Hy. Lafonc, in a letter to the *Times*, gives it as his opinion that damage is likely to be done to the trade of the port of London from the very extravagant new dock housing and delivery rates, making charges on produce and dock dues higher than those in any other port in the kingdom, and which are certainly not justified by the increased payments to the men, even if meal times are paid for. Mr. Wm. Green (Brookes & Green) also states that Continental firms striving to get foreign produce shipped "direct to their markets" are very naturally taking advantage of passing events, and pointing out to Indian and Australian shippers the disturbed condition of the London labour market, the delay in the disposal of their goods through slow work at the docks, and specially directing attention of foreign merchants to the increased London dock charges.

OCEAN PENNY POSTAGE.—Mr. J. Henniker Heaton, M.P., the indomitable postal reformer, has just returned from a voyage to the East, and from a letter of his in the *Times* of last Tuesday it appears that he is more determined than ever to push on with his advocacy of the great object of establishing a penny letter post throughout all parts of the British Empire and the United States. The enormous social and commercial advantages of such a boon are too obvious to need recapitulation, but the most striking feature of Mr. Heaton's argument is his statement of the probable expense of reform. He estimates that an additional expenditure of 60,000*l.* would suffice to provide the facilities for this immense gain. If he means, as the *Times* seems to understand, that this is the extent of the loss of revenue to be anticipated, and if he is right within half a million or so, the question is ended. Sixty thousand pounds is considerably less than a halfpenny a piece for every inhabitant of the British Isles, and would be only the fraction of a farthing if divided by the whole number of the people to be benefited. The wonder is that, if that approaches the cost, any Postmaster-General should hesitate an instant to introduce a reform which would immortalise him. Mr. Henniker Heaton says the cost of one war-ship would establish ocean penny postage for three years. We do not advocate the abandonment of war-ships, but we are confident that ocean penny postage would do far more than half a dozen of them in preserving Great Britain's peace and promoting her prosperity. The commercial classes should assure Mr. Henniker Heaton of their cordial support in his important crusade.

OXYGEN IN WATER.—Dr. J. C. Thresh, in a paper communicated to the Chemical Society, has proposed to take advantage of the well-known reaction between nitrous acid and potassium iodide for the purpose of estimating the amount of dissolved oxygen in water. Those familiar with Allen's method for assaying spirit of nitrous ether, or with the dispensing of mixtures containing that spirit and potassium iodide, know that the nitrous oxide evolved in the reaction is quickly reoxidised by the air, and proceeds to decompose more potassium iodide. The same thing must take place if water contains oxygen, so Dr. Thresh, recognising that the nitric oxide serves as a carrier of the oxygen, points out that it will liberate an amount of iodine equivalent to the oxygen present, in addition to that resulting from the initial action of the nitrous acid, which is, of course, known, and by deducting the amount liberated by the nitrous acid from

the total amount, the difference will be that corresponding to the oxygen dissolved in the water examined. The only thing which remains is to apply the method, and this, as far as we can judge from the published abstract, Dr. Thresh appears to have done successfully. The complete communication will doubtless appear in the Society's journal.

PRACTICAL VISION-TESTING.—Mr. Brudenell Carter, the well-known ophthalmologist, has been lecturing to the Society of Arts on practical vision-testing. The greater part of the lecture was devoted to colour-blindness and the means of testing it, so that it is not surprising that controversial and personal matters had a larger share of the discourse than is commonly to be found in lectures delivered to the general public. There are several methods of testing colour-blindness, and one of the objects of the lecture was to point out that the tests employed for those in the public service, as, for example, in the examination of seafaring men and of engine-drivers, are not sufficiently crucial, and men who are really colour-blind can be "coached" to pass the examination in this subject, but this coaching does not extend its influence so far as to prevent collisions. It is unnecessary to enter here into the merits of the respective tests which are used, but when such authorities as Mr. Brudenell Carter state that they do not completely guard the public against danger, it is time that some steps were taken to test the truth of the assertions. In regard to vision-testing for the selection of spectacles and similar purposes, Mr. Carter said that printed types, of regulated sizes, are much used for vision-testing, and answer fairly well for many purposes, but they are inferior, in the accuracy of the results which they afford, to those groups of spots which correspond with the anatomical structure of the retina. The best kind of spots are hexagonal in shape, and the best mechanical arrangement for testing vision by groups of dots is to have a series of these groups placed in a circle near the margin of a revolving wheel, which again is placed behind a disc with a marginal aperture of such a size as to disclose one group at a time. The person to be examined is placed at the proper distance (50 metres), in proper light, and the disc is turned round. As each group of dots is disclosed the person tested should name the number of dots composing it, rapidly and without mistake. Whoever can do this has normal vision. If the examinee makes mistakes, the next step is to allow him gradually to approach the dots until he reaches a distance at which his mistakes cease. The difference between the distance at which he ought to see and the distance at which he can see permits the degree of acuteness of vision which he possesses to be stated in a fraction with absolute accuracy.

WHY NOT WORK TOGETHER?—"M. B., C. M." writes to the *British Medical Journal* to say that he has let to a chemist the shop below the dwelling-house which he ("M. B.") occupies. "M. B." consults in the shop, and the chemist dispenses his prescriptions. "One night recently," he says, "a patient came in suffering from toothache. The chemist in my presence extracted the tooth, and charged 6*d.* I do not think this will tend to promote good feeling betwixt us, and I should like to know what position I should assume. No agreement has yet been signed." To which the medico-ethico-legal editor thus responds:—"A more ill-advised arrangement than that he would appear to have entered into with the chemist could not, in our opinion, well be. Moreover, to "consult in the shop," to quote his own expression, is highly derogatory to him as a medical practitioner, and cannot fail, in the eye of the public, to more or less associate him with the trade business thereof. Further, to sanction by his presence the extraction of a tooth by the

chemist in question—and for such a fee, moreover—was, we need scarcely add, something more than unwise. What, we are tempted to ask, is the profession coming to?"

"SOMETHING MORE THAN UNWISE"—criminal that means, or, to please the Bishop of Peterborough, let us say, sinful. The chemist, it seems to us, was a donkey to jeopardise so good an arrangement as he seems to have got, and the M.B. was a donkey if he did not know how to deal with the matter without consulting a newspaper. But we are unable to imagine what there was "more than unwise" in the conduct of either. A fair and square, open and above-board arrangement between prescriber and dispenser may be mutually advantageous, and need not of necessity be in any respect iniquitous. It is not Brook Street style, but it does not profess to be; and, besides, we cannot all crowd ourselves into Brook Street. Sixpence for tooth-drawing is cheap, we admit; but tell us, gentle Ethico, what is there wicked about it?

THE WILLS OF AUSTRIAN APOTHEKERS.—Mr. Stefan Frumm, the proprietor of the apotheke "Zum Römischen Kaiser," one of the best-known pharmacies of Buda-Pesth, died the other day. He was 61 years of age and unmarried, and is said to have left an estate of 500,000 florins, consisting of two houses, the pharmacy, a soda-water manufactory, and capital invested. The deceased has left one-half of his personal estate to his nephew, the director of the Rochus Hospital, and the other half to the city of Buda-Pesth for the establishment of a home for neglected boys. To his dispenser he gave the option of 10,000 florins in money or the pharmacy, and, as the value of the latter is estimated at 50,000 florins at least, that gentleman has not been long in making up his mind. Legacies are also left to all his other employes, while to each of the friends whom the deceased used to meet nightly at his club, and who appear to have freely consulted him concerning their various complaints, he leaves the whole of the stock in his pharmacy of drastic remedies, each friend being assigned a remedy most suitable for the pet complaint with the accounts of which he used to worry the deceased during lifetime. Another Austrian pharmacist, who has just died at Marburg, has left the whole of his estate, about 20,000 florins, to the local branch of the Society for the Purification of the German Language from Foreign Idioms.

INDIRECT DAMAGES.—A financial contemporary says that an amusing case is occupying the attention of the Johannesburg courts, which should be accepted as a warning by druggists in the neighbourhood of Capel Court, now that the influenza is rife. It seems that a broker took two prescriptions to a chemist to be made up, one for a draught and the other for a gargle. Somehow the labels got mixed, with the result that the compound which was only intended to wash out the broker's throat was sent on an exploring expedition into the interior of his anatomy, while the other was used for titillating his palate. This reversal of processes, the broker alleged, "made him so bad that he couldn't shout on 'Change,'" and consequently he lost business to the extent of 500*l.*, for which he sues the chemist. The chemist in turn alleges that the broker changed the labels so as to bring the claim.

ARISTOL is the name which F. Bayer & Co.'s successors have given to a new iodine derivative of thymol, which they have patented and introduced as an iodoform substitute. According to Dr. F. Goldmann, who writes about the matter to the *Pharm. Zeit.*, aristol is dithymol di-iodide, the iodine atoms replacing the hydrogen of the hydroxyl in the thymol molecule; the formula is therefore $2[\text{C}_9\text{H}_7\text{O}_2\text{I}]$. It is

made by adding a solution of iodine in potassium iodide to a soda solution of thymol. A voluminous brownish-red amorphous precipitate of the new derivative is formed, which contains 45.8 per cent. of iodine. Aristol is insoluble in water and glycerine, slightly soluble in spirit, and easily in ether and fixed oils. At present the remedy has been tried in psoriasis with as favourable results as are given by chrysarolin. It has also been used for lupus, and has been found to be as powerful an antiseptic agent as iodoform. Its lightness is specially favourable to its use as a dusting powder.

VANADIUM has been found in caustic potash by Mr. Edgar F. Smith, an American chemist. It was present only in small quantity, about $2\frac{1}{2}$ grains per lb., which was sufficient to alter the colour of sulphide precipitates. The source of the vanadium is not stated. The same contaminant was found in commercial caustic soda about twenty-five years ago.

RED-POPPY ALKALOIDS.—Text-books generally state that the flowers of the red poppy are free from morphine, but contain a peculiar alkaloid, *rheadine*, which was first isolated by O. Hesse, and which possesses the property of forming, in the presence of acids, solutions of a rose to purple colour, according to the degree of dilution. Some time ago E. Dieterich reported that he had succeeded in isolating morphine from red-poppy flowers, the yield from the extract being 0.17 per cent. In response to this statement Hesse has now repeated his experiments, and reports (*Arch. d. Phar.*) that from 300 grammes of the fresh flowers he obtained scarcely a milligramme of crystals, which, although resembling morphine in appearance, failed to give the morphine reactions. But it furnished the red solution peculiar to *rheadine*, and although he has no doubt that the alkaloid was that body, he mentions that another alkaloid, *rheagenine*, seems to exist in red-poppy flowers, and promises more information about it when he resumes the research with fresh material.

PHENACETIN.—Dr. Hager has been examining three samples of phenacetin, and it is surprising to note how different all were from each other. They of course represent the products of three different manufacturers. Pure phenacetin does not colour sulphuric acid. The test is applied by heating 0.06 gramme of phenacetin in 1.5 c.c. of strong sulphuric acid to about 45° to 50° C. One sample (A) only came out water-white, the next best (B) gave a golden-brown solution in five minutes, and the third (C) quickly afforded a brown solution. The respective melting-points of the samples were, A, 135° C.; B, 132.5° C.; and C, 130.5° C., thus showing that the first was the only one which could be relied upon for strict purity.

HYDROGEN PEROXIDE.—Gawalowski states in *Rundschar* that he has discovered a new reaction for hydrogen peroxide, the same not being produced by ozone. The reaction takes place with basic metallic salts, especially those of lead and copper. Thus, when solution of subacetate of lead is mixed with solution of hydrogen peroxide, a brownish-red precipitate falls ("superoxyhydrate of lead"), which in a short time changes to bright red, then orange, flesh-colour, and finally white. With basic copper salts a black precipitate of basic oxide of copper is formed, which gradually changes to bright blue oxyhydrate. The reagents which may be used are lead subacetate, lead acetate and alkali, lead nitrate and alkali, and alkaline solutions of cupric sulphate, chloride, and nitrate.

FOR HICCUGH AFTER INTOXICATION, 2 drops of beech-tar creosote, given in a little water, is a splendid specific.

BRITISH AND FOREIGN CONSULS' REPORTS.

JAPAN.

Oil Colours. These articles are purchased exclusively in England, there being no German competition at present. The demand is extending from year to year, yellow, red, and white being the most popular colours.

Drugs and Chemicals. The total import of drugs and chemicals in 1888 was valued at 1,645,875 yen, of which 956,567 yen were imported into Yokohama. The bulk of these articles are of German origin. All medicinal goods before reaching the Japanese public must be stamped with the words "Fit for medical use" and pass special board of examiners. Since the beginning of 1888, however, only such preparations as have been prepared according to the instructions of the Pharmacopœia Japonica are admissible. This Japanese Pharmacopœia is issued in Latin and in the vernacular, and modelled very closely upon the German one. The Japanese pharmaceutical industry is hardly yet sufficiently advanced to offer any serious competition to foreign importers. The only Japanese pharmaceutical preparations which have almost completely ousted foreign-made goods from the market are phosphorus, sulphur, sulphuric acid, and nitrate of silver. For the rest no native competition need be feared for at least some years to come; in fact, European medicine being more and more popularised in Japan, the prospects are that this branch of trade will still develop considerably. The following observations refer to the principal drugs sold on the Japanese market:—The demand for boracic acid has fallen off; in 1887 the consumption in Yokohama amounted to about 1,000 lbs. per month, in 1888 to only about 800 lbs. Carbolic acid continues to be bought exclusively in England, but salicylic preparations, another article of great importance, comes mostly from Germany. Salicylic acid is principally used in Japan for preserving saké, the national beverage, prepared from rice. The best way to import salicylic acid is to pack it in tins or cardboard boxes, as the local dealers like to put it up in their own vials. The consumption of alcohol is increasing. It is bought in Germany and America, and is packed in kegs. The manufacture of sulphuric ether is about to be taken up in Japan. The trade in atropine has almost entirely gone into British hands during the last few years. German atropine has been frequently objected to by the Japanese authorities on account of its bad quality. Similar objections have been made to bismuth, which was formerly also bought almost exclusively in Germany. Chloroform finds a regular market in parcels of 500 lbs. at the time, but the demand has fallen off owing to the increase in the consumption of cocaine, which is generally sold in 1-grain vials. In quinine Pelletier's brand continues to be popular, but during 1888 German brands have for the first time made themselves seriously felt on the market. Antipyrin and antifebrin are becoming very popular. Iodine preparations come mostly from Germany, but nearly all the morphia used is English. The demand for santonine has declined, but that for pilocarpine in 1-grain vials is slightly on the increase. The use of tannin is increasing in medicine as well as for dyeing purposes. Crystals are almost exclusively used. Caustic soda is becoming an article of importance owing to the growth of the local soap and paper making industries. It has hitherto been imported exclusively from England in 500-lb. to 600-lb. iron drums. The following figures refer to the quantities of some of the principal drugs imported into Yokohama in 1888:—Alum, 549,283 catties; bromide of potassium, 20,146 catties; quinine, 64,675 oz.; morphia, 5,966 oz.; gum arabic, 40,376 catties; glycerine, 61,649 catties; iodide of potassium, 18,598 catties; carbolic acid, 52,371 catties; cinchona bark, 41,041 catties; salicylic acid, 7,701 catties; amorphous phosphorus, 8,236 catties; santonine, 3,600 catties; bicarbonate of soda, 1,397,577 catties; caustic and crystal soda, 2,653,275 catties; various drugs and pharmaceutical articles, 545,000 yen; dyestuffs, 816,000 yen; oils, 1,743,000 yen.

Japan Wax. The preparation of vegetable wax is one of the principal industries of the island of Kiu Siu. The wax is gathered in the most primitive manner from the

berries of the *Rhus succedanea* (Hazenoki tree). In some districts hydraulic presses have been introduced for its preparation, but the result has not been satisfactory. The best wax is produced in Kumamoto, but does not appear in commerce, as it is all sent to the Imperial court. The best commercial wax is made in the province of Hizen, and brought into commerce *via* Osaka. The traders in that place are better capable of purifying and bleaching the wax than the peasants in Kiu Siu. In Japan the wax is largely used for candles and in the preparation of hair-ointment.

PORTUGUESE COLONIES.

Export Duties in Mozambique. An export duty is levied on nearly all goods shipped from Mozambique, and this duty, in the case of some articles, such as ivory, is so heavy as to operate considerably against any expansion of trade. Calumba root and oil seeds, however, only pay 1 per cent.; orchella and gums, 2 per cent., and beeswax 5 per cent. *ad valorem*.

SPAIN.

Cream of Tartar. In his report on agriculture in Catalonia and Valencia, the British consul at Barcelona states that the plague of phylloxera is increasing at an alarming rate in these provinces, and it is now reported that proprietors are almost decided to cut down their vine plants to the ground with the hope of saving them. This would also injuriously affect the interests of the cream-of-tartar manufacturers, as there will be no wine lees, which is used in its production: these manufacturers are, therefore, getting up a petition to the Government to remove, for the time being, the duty on the importation of French wine lees, otherwise they will have to close their factories.

Olive Oil in Malaga. The consumption duties on olive oil are so heavy that Spanish olive oil is actually sold in England at more than 1*d.* a lb. cheaper than in Malaga. Various mercantile associations continue to petition the Government for the abolition or reduction of these duties, but with little or no success.

It is to be regretted that no satisfactory method for refining the oil has ever been put into operation, because, owing to the want of such a system, after the oil extracted from the first pressure the remaining large quantities are used for lubricating machinery or lighting purposes.

STRAITS SETTLEMENTS.

Pepper-growing in Penang. The cultivation of pepper, which, in the early days of the settlement, was one of the chief industries of the island, is being taken up again, and, if successful, should give large profits, for the price of the article is high, and the inhabitants of a free port can compete with advantage with planters in Achin (Sumatra) and Trang (west coast Malay Peninsula), who have to pay an export duty. Small plantations in Penang Island promise well. In the Province of Wellesley, where a small colony of Achinese pepper-cultivators established themselves about ten years ago, pepper-planting has much extended.

Drug Cultivation. At the Botanic Gardens in Penang they are hard at work experimenting with the propagation of economic plants. Castor-oil seeds were obtained from the Botanic Gardens at Calcutta. The plants have grown vigorously and are now commencing to fruit. Croton oil grows freely and fruits abundantly. Annatto also grows vigorously and is deserving of a trial on a large scale. Cubebs promise well, and are being propagated as largely as possible.

VENEZUELA.

Cocoanut Oil and Tonquin Beans. The manufacture of cocoanut oil has recently been commenced in Venezuela by a Frenchman, M. Boissellier, who has opened a factory at Cumana. Tonquin beans are principally collected in the forest region of the upper Orinoco valley, where the bulk of the dividivi and indiarubber exported from the country are also gathered. These forests are exploited by the Compagnie Française du Haut Orénoque. The principal trade centre for these products is Ciudad Bolivar, to where the goods are carried by the Orinoco steamers.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., January 30.

THE week under review has again been exceedingly quiet, and business in the drug and chemical markets has been almost confined to two or three speculative articles, though even in quinine, which occupies the premier place in the trade of the week, no great improvement in price can be reported. Refined camphor is very firm and rather dearer for foreign; the crude drug, for arrival, has also sold at higher prices. Citric and tartaric acids and cream of tartar have sold at lower rates, though apparently there are many indications which would point in a different direction. In quinine a very heavy business has been transacted at firm, though scarcely dearer, rates. Opium is reported dearer again from Smyrna; saffron also keeps advancing, and olive oil has risen in price. There is some star-anise offering at very high rates. Sandal-wood oil has advanced and is likely to go up further. In drysalteries and heavy chemicals there are several changes. Gambier and cutch keep very firm. Salammoniac, benzol, soda crystals, and caustic soda are dearer, and the price of Mont-real potashes and Epsom salts has likewise advanced slightly. Sulphate of ammonia neglected and lower. Logwood and fustic dearer. Shellac has been in request at receding rates, and at to-day's auctions most of the recent advance in East Indian gum arabics was lost. Spices generally flat and lower. Zanzibar and Java cloves, black pepper, sago, and flour tapioca are all lower. Ceylon tea is also cheaper. In oils petroleum and palm oil have declined, but there is a hardening tendency in turpentine.

ALTERATION IN THE 'CHANGE HOUR.—Another attempt is to be made to secure the attendance of the habitués of 'change at an earlier hour than that obtaining at present. We understand that the members of the drug trade have unanimously agreed to meet on and after Monday next, February 3, at 3 P.M. and to leave not later than 3.30 P.M.

ACIDS.—*Citric* has been exceedingly dull of sale this week, and for second-hand stuff we cannot make a higher quotation than 1s. 3d. to 1s. 3½d., although the makers quote nominally higher rates. The trade in all varieties of *Carbolic* acid is quiet at present; crystals of 39° to 40° C. at 1s. 0½d. per lb., bulk liquid at 1s. 1d. per gallon. Synthetic carbolic acid is quoted rather above these rates. *Picric* acid in crystals neglected at 1s. 5d. per lb., and without any demand for export. *Boric* acid firmly held, both for immediate delivery and for shipment. *Oxalic* very dull, with sellers at 3d. per lb., but we do not hear of any transactions (*Sal acetos*, 4½d. per lb.). *Acetic acids* in demand, and makers fully employed. *Tartaric* dull and lower at 1s. 2½d. to 1s. 2¾d. for foreign. The bear party are having it all their own way with this article at present.

AMMONIA SALTS.—*Carbonate* dull and quiet at 3½d. per lb. The business in *Sulphate* continues to be exceedingly dull and dragging. The quotations are: For Beckton sulphate, 11l. 15s.; London, 11l. 17s. 6d. to 12l.; Hull and Leith, 11l. 12s. 6d. There does not appear to be much prospect of an advance just at present. The price of *Sal ammoniac*, after having been stationary for a long time, has now been advanced 1s. per cwt., and the present quotation is: First quality, 37s.; second ditto, 35s. per cwt.

ANTIMONY.—*Crude Japanese* scarce and very firm, nothing offering on the spot, 70s. being the nominal price. *Regulus* is sold at 76s., and from 77s. to 78s. is now quoted. Antimonial preparations rising in sympathy.

ARSENIC steady at 13s. 3d. per cwt. for best white powder.

BENZOL is very scarce, and firmly held at 3s. 11d. to 4s. for 90 per cent., and 3s. 2d. to 3s. 3d. for 50 per cent., with every prospect that the top price has not yet been reached.

BLEACHING-POWDER is rather inactive after the recent rise, and buyers are holding off somewhat at present. On the Tync the nearest quotation is 5l. 5s. to 5l. 10s., in Lancashire 5l. 5s., and in London 6l. 10s. to 6l. 15s.

BORAX rather quiet and inactive, at 28s. to 28s. 6d. per cwt. for the second hand.

CAMPHOR (CRUDE).—Higher prices are again quoted for forward delivery, and we understand that about 300 piculs Japan have changed hands since our last report at 138s. 6d. "c.i.f." for January-February, and 140s. "c.i.f." for December shipment. We also hear of a sale at 145s. "c.i.f." for a parcel which is shortly due. On the spot the quotation remains 180s. per cwt. There have been no arrivals of any importance since our last report—only about 8 packages from Germany.

CAMPHOR (REFINED).—The *English* refiners are still selling at 1s. 8d. per lb., but they talk of again raising their price shortly. A few days ago it was stated that some *German* refined camphor in second-hand had sold as low as 1s. 5d. per lb., but we doubt whether this sale is authentic. At present foreign camphor is quoted at 1s. 7d. to 1s. 7½d.

CINCHONA.—The reports of the shipments from Ceylon and the arrivals at Colombo from up-country show a large falling-off as compared with previous seasons. Our imports from all quarters since our last report have been 1,458 packages. At the auctions on Tuesday the following quantities of bark were offered for sale:—

	Packages	Packages
Ceylon bark	2,353 of which	2,168 were sold
East Indian bark ..	731 "	629 "
Java bark	61 "	50 "
South American bark	323 "	460 "
Fiji bark	6 "	6 "
Total	3,974 "	3,311 "

At the opening of the sales the demand was decidedly slack, and prices showed signs of wavering, more than one catalogue being sold at some slight reduction of the average unit of the preceding auctions. As the sales proceeded, however, competition became keener, especially for the better class barks, of which large quantities were offered towards the close of the sales. Ultimately the opening decline was quite recovered, and the auctions closed with a tone of decided firmness. The unit value was irregular, but most lots sold at the rate of 1¾d. to 2d. per lb. The quality of the bark offered showed a decided improvement upon the recent auctions, and there was quite a large proportion of good ledger and officinalis barks from Ceylon, both original and renewed. The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	240,085
" the American, French, and Italian works ..	196,034
" the Brunswick factory	107,918
Messrs. Howards & Sons	56,825
Agents for the Auerbach factory	49,357
" the Frankfort o/M. and Stuttgart works ..	35,805
Sundry druggists	29,225
Total quantity sold	751,249
Bought in or withdrawn	93,307
Total amount of bark catalogued	808,556

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

CEYLON BARK.—*Original*: Red varieties: Fair to good branch chips, a good many parcels, 2d. to 3d.; good chips mixed with small branch quill, 3d. to 3½d.; fair to good bold quilly stem chips, 2½d. to 3d.; fair stem chips, 1¾d.; bright, but very woody, ditto, 2d. to 3½d. per lb.; spoke shavings, fairly bright but small to good, 2d.

to 3*d.*; good bold bright ditto, 3½*d.* to 4*d.*; chips and shavings mixed, 2*d.* to 2½*d.*; broken quill, irregular, weak, and brown, 4½*d.*; partly flat and papery, 3½*d.*; root, bright but very woody to good, 1½*d.* to 3½*d.* per lb. Yellow: Good bright spoke shavings, 2½*d.* to 4*d.* Hybrid: Stem chips, 3*d.* to 3½*d.*; good strong root, 4*d.* to 4½*d.* Grey varieties: Fair chips mixed with branch quill, 2½*d.* to 3*d.*; good bright and bold ditto, 3½*d.* to 5*d.*; fair bold branchy stem chips, 4*d.* to 4½*d.*; good ditto mixed with weak quill, 5½*d.*; fine rich chips, 8*d.*; chips and shavings mixed, 3*d.* to 3½*d.*; bold and dusty mixed root, 7½*d.* per lb. *Renewed*: Red varieties: Rather weak and dusty to fair chips, 3½*d.* to 4½*d.*; fine and bold ditto, 5½*d.* to 6½*d.*; medium stem chips, 3*d.* to 4*d.*; good bright strong ditto (several piles), 5*d.* to 5½*d.*; shavings and chips mixed, 3½*d.* to 4*d.*; good bright spoke shavings and siftings, 6*d.* to 7*d.*; fair but small ditto, 5*d.* to 6½*d.* Hybrid: fair to good quilly stem chips, 4*d.* to 5½*d.*; yellow chips and root mixed, 2*d.* to 3½*d.*; fine bold bright rich chips, 11*d.* per lb. Grey varieties: Good bold to fine bright quilly mixed chips, 6½*d.* to 8½*d.*; small ditto, 5*d.* to 6*d.*; fair to good bright stem chips, 6½*d.* to 8½*d.*; dull and small spoke shavings, 3*d.* to 3½*d.*; bold but pale ditto, 8*d.*; fine stem chips, 8*d.* to 11*d.* per lb.

EAST INDIAN BARK.—*Original*: Red varieties: Dust and dull chips, 2½*d.* to 3½*d.*; dark dull spoke shavings, 3½*d.*; small quill and silvery chips mixed, 3½*d.*; ditto rather better, 4½*d.*; dark brown weak quill and chips mixed, 4½*d.*; bold branchy chips, 4*d.* Grey varieties, which were largely represented, being mostly from Madras: Dull thin twigs, 1*d.*; small dust and shavings, 1½*d.* to 2½*d.*; good branchy chips, 5½*d.*; strong and quilly ditto, 6½*d.* to 7*d.*; fine bold bright, 7½*d.* to 8½*d.* per lb. *Renewed*: Red varieties: Fair to good branchy chips, 3½*d.* to 4*d.*; good strong ditto, 4½*d.* to 5*d.*; dull chips, 3*d.* to 4*d.*; fair to fine rich spoke shavings, 4½*d.* to 9*d.* per lb. Grey varieties: Small to good bright spoke shavings, 4½*d.* to 6½*d.*; small siftings, 5½*d.*; fine strong branchy chips, 8½*d.* to 11*d.*; one fine lot of stem chips, 1*s.* per lb. Good renewed yellow spoke shavings, 9½*d.* per lb.

JAVA BARK.—Yellow varieties: Fair to good branchy chips, 5½*d.* to 6½*d.*; fine strong rich chips, 11*d.*; root, 9½*d.* per lb. Long fine mossy, heavy red druggists' quill, bought in at 2*s.* 3*d.* nominally; and stout brown short ditto, at 1*s.* 2*d.* per lb.

SOUTH AMERICAN BARK.—Of 669 packages cultivated Bolivian *Calisaya*, partly imported *viâ* Hamburg, 306 were sold at full prices, viz., 7*d.* to 8½*d.* for good silvery, but rather irregular, and 7½*d.* to 10½*d.* for strong silvery quill; broken quill and branch, 6*d.* per lb. Altogether 43,741 lbs. were bought in, and 27,607 lbs. sold. A parcel of 154 packages *Cuprea*, imported in 1883, good bold strong barks, sold fairly well at 4½*d.* for sound, and 3½*d.* to 4*d.* per lb. for damaged.

FIJI BARK.—The second consignment from these islands, consisting of 859 lbs., was included in the sales, and sold rather cheaply. It consisted of *Succirubra* bark of rather poor appearance, and was all more or less sea-damaged. Two bales branch quill, mixed with flat pieces, rather woody and badly harvested, sold at 3*d.* per lb. (analysis, 2·3 per cent. q. s.); one bale (1·4 per cent. q. s.) small branchy twigs, at 2*d.* per lb.; and three bales (1·3 per cent. q. s.) dull dark weak twigs, also at 2*d.* per lb.

CASCARA SAGRADA.—On our market this article has not moved. The nearest quotation here is 7*d.* per lb., but the market is entirely stagnant. From New York we have received the following, dated January 17:—Cascara is held at from 7*d.* to 9*d.* in store New York, according to quality, thick or thin bark, and 6,000 lbs. were sold for export this week at 6½*d.* per lb., New York terms. The stock in New York to-day is 20,000 lbs., in San Francisco 25,000 lbs. In addition to this a speculative capitalist in the interior of California, who, believing in coming high prices through destruction of trees and increasing demand, holds 125,000 lbs., about five months' consumption, in a building specially built for the purpose, which he means to hold till he gets 1*s.* 3*d.* In California prices rule above New York parity. New York is bearing the market, and California is concentrating stocks and bulling the market.

COCAINE.—The price for hydrochlorate in bulk is 15*s.* 6*d.* per oz. Messrs. Böhringer & Sons state that the failure of the last crop of coca leaves has put an end to the continued depreciation in cocaine, and prices which in course of the

year had dropped to 14*s.* have again attained the same level as in January, 1888. The consumption is on the increase, but the profit on the manufacture of the hydrochlorate, has become so very trifling that some firms have altogether given up making it.

COPPER (SULPHATE) scarce and firm at 24*l.* to 24*l.* 10*s.* on the spot, according to brand.

CREAM OF TARTAR.—The decline is still continuing, and best white French crystals cannot be quoted above 104*s.* to 105*s.* per cwt. at present.

CUTCH quiet, but firm; sales of M.M. in tablets at 29*s.* for good quality. At auction 2,655 boxes, mostly very common, were offered, and about 400 sold without reserve; R.S. in tablets at 20*s.* 6*d.* to 23*s.* per cwt.

DYEWOODS.—There has been an advance in the price of *Logwood* recently, and good parcels are being picked up rapidly at rather better prices than before. The stock of *Fustic* in Liverpool has also been reduced into a small compass, and for arrival there is a good demand at full prices.

ERGOT OF RYE.—This article is quite a dead letter at present; the nearest quotation for *Russian* ergot is 1*s.* 2*d.* to 1*s.* 2½*d.* per lb., London terms, but we do not hear of any business.

GALLS.—We do not hear of any business in *China* and *Japan* galls on the spot, but the reports from China are very firm and talk of a rising market. Some transactions at 61*s.* 6*d.* c.i.f. Antwerp, and at 62*s.* c.i.f. in plum-shaped China galls, are also reported.

GAMBIER very firm, with sales of February-March *Block*, 26*s.* 10½*d.*; January-February, 27*s.* 1½*d.* On the spot there is very little offering, either here or in Liverpool; 28*s.* 3*d.* is the nearest price.

GLYCERINE quiet but steady. We hear of some sales of German double-distilled, s.g. 1·260, in second hand, at 63*l.*, but the manufacturers quote higher prices.

GUM ARABIC.—At to-day's auctions the very large supply of 5,724 packages was brought forward. The demand throughout the auctions was exceedingly slow, and the advance which has recently been obtained for *East Indian* gums sold by private contract was not maintained. *Ghattis* declined to about par of the last auction rates, and the increase for the recent private transactions was nearly all lost. *Amrads* were also lower, and a small quantity of *Aden* gum which was sold was generally quitted at a decline. *Bombay* gums neglected and dull; good qualities were rather scarce. Of *East Indian* gums of all varieties nearly 3,600 packages were included in the sales, and for these the following prices were paid:—*Ghatti*, very common, dark and woody to fair, 19*s.* to 30*s.* 6*d.*; medium, 31*s.* to 36*s.* 6*d.*; good palish, 55*s.* to 57*s.*; and fine pale to exceptionally good, 67*s.* 6*d.* to 81*s.* Siftings sold at 10*s.* to 16*s.*; and common woody to fair pickings at 10*s.* to 16*s.* Of *East Indian Amrad*, common brown and dark mixed to good amber drop brought 35*s.* to 48*s.* 6*d.*; ambery and fine bright pale coloured *Karrachee*, 50*s.* to 85*s.*; dark to soft clean pale siftings, 17*s.* to 28*s.*; dark *Oomra*, 30*s.* to 35*s.*; and common *Madras*, 26*s.* Of *Aden* gums, only a small part was sold; common to fine pale frosted sorts 30*s.* to 61*s.* 6*d.*; dull to good clean pale olibanum-scented 23*s.* to 45*s.* Of fair *Mogadore Amrad* small sales were made at 48*s.* Of *Cape* gum 116 packages were offered, of which a fair proportion sold at 80*s.* to 89*s.* for good to fine rather dusty pale yellow sorts; common dark and blocky to fair brown glassy 15*s.* to 29*s.* Insoluble *Persian* gum from Bushire was in large supply to-day, including over 400 packages, part of which was sold at from 5*s.* up to 17*s.* per cwt. Several lots of *brown Barbary* and *Mogadore* gums were bought in, also 12 packages slightly blocky gums from *Mexico*, 92 *Australian*, and 112 from the *African West Coast*.

GUM OLIBANUM.—At to-day's auctions 740 packages were offered, but only a comparatively small proportion changed hands; fair mixed to good pale drop at 40*s.* to 48*s.* 6*d.*, pale *Aden* sorts at 29*s.* 6*d.*, fair siftings 14*s.* to 15*s.*, common dark to good pickings 14*s.* 6*d.* to 23*s.* per cwt.

IODINE.—Matters are still in *statu quo*, and in the absence

of any reliable quotation business is practically at a standstill.

MAGNESIA.—The prices for *Carbonate* and *Calcined* are steady, but unchanged; that of *Sulphate* has recently been advanced by 2s. 6d.

MARSHMALLOW ROOT.—Prices are moderate at present, and the crop has been both very heavy and of good quality, but it is said that since the influenza epidemic there has been an unusually heavy demand for the drug, especially on the Continent. The coming second crop in April is not expected to be a large one, and, as the stocks are gradually falling off, the present position of the article is thought to deserve attention.

MENTHOL.—For available parcels of good native crystals the quotation of 10s. per lb. is maintained, but the demand has been very slack during the last few days, and for forward delivery quotations rule rather easier, January shipment offering at 8s. per lb. "c.i.f." terms.

MUSK.—We have imported 2,250l. worth from China since our last report. It is stated that buyers, both here and in Paris, who were scared off the market by the appearance of the artificial product, are again regaining confidence, and sales are reported of fine *Tonguin* pods at about the last quotations. So far as this country is concerned, the firm who are acting as agents for the new product have received no stock or samples yet, and we understand that the small quantities which are now in the hands of perfumers for experimental purposes have all been received indirectly from Paris. We do not think that altogether more than a few ounces have yet been imported into this country.

OIL (CASTOR).—The Liverpool market has become steady after the recent sharp decline, and to-day good Calcutta seconds sold at 3½d., while first pressure French oil is said to have sold at 3½d. per lb. ex quay. In Calcutta on January 7 the stocks were accumulating, and the market closed weak. The arrivals of seed had been rather heavy, and some sales had been made at lower rates.

OIL (COD-LIVER).—Up till the present time there is very little news of the new fishing, which is not yet sufficiently advanced to admit of a forecast of the result. The experimental fishing, however, which has taken place thus far shows the fish to be fat and in good condition. Prices for the new oil cannot yet be given, as the quotations for the raw material in Norway have not been fixed yet, but for best non-freezing oil of last season, 65s. per cask London terms, or 60s. f.o.b. in Norway, is the quotation.

OIL (OLIVE).—The markets have become much firmer, and higher rates come from all the producing countries, especially from Spain and Naples. In London the market has been almost cleared of the so-called common oils, *Spanish* oil having advanced from 39l. to 43l., while from Seville 44l. 10s. c.i.f. terms is the lowest quotation. *Mogadore* oil on the spot is exceedingly scarce, and as much as 38l. 10s. is now asked; there would probably be buyers at 38l. *Messina* oils are very dear, 42l. to 43l. c.i.f. terms. In London there is practically no stock of this variety. In Liverpool the market is also very firm at the recent advance. As regards eating oils the market is also firmer, but the demand remains slow, and prices have not yet advanced. They still range from 4s. 9d. for fine (sublime) to 6s. for best cream.

OIL (SANDALWOOD).—Prices are firm, and likely to range higher shortly.

OILS (VARIOUS).—*Cocoonut* very quiet and flat. Current prices: Ceylon, 23s. 6d.; Cochin, 26s. and 26s. 6d.; and Mauritius, 24s. to 24s. 6d. *Cotton seed* unchanged; crude, spot, 19s. 3d.; refined, 21s. 9d. to 22s.; Hull, refined naked, 19s. 9d.; crude, 18s. to 18s. 1½d.; Liverpool, refined, steady but quiet, 21s. 9d. to 22s. 6d. per cwt. *Linseed* oil steady and firm on the spot, but rather cheaper for delivery; 20s. 10½d. to 21s. 1½d. is the price here, and in Hull 20s. 4½d. naked; Liverpool, export casks, 22s. to 22s. 6d. *Palm oil*: London dull of sale, at about 24s. 6d. for fine Lagos; in Liverpool prices have declined, but more business has been done at cheaper rates, Lagos at 21s. 6d. *Petroleum* cheaper; American oil, spot, 5½d. to 5¾d., month the same price; Russian oil, spot, 5½d.; February 5¾d. *Rape oil* steady; brown, spot, 31s. to 31s. 3d.; refined, 32s. 9d.; in Liverpool re-

finer Stettin is offering at 35s. 6d. per cwt. *Turpentine* rather dearer; American spirits, spot, 32s.; February-April, 32s. 3d.; September-December, 28s. 6d. to 28s. 9d.

OPIUM.—The London market remains exceedingly firm, with pretty considerable transactions both in manufacturing opium and in Persian. The latest reports from Smyrna show that the previous estimates of the 1889 crop have been put rather too high, the total now being believed not to exceed 5,500 cases. The autumn and winter sowings are now admitted to have been failures altogether, but of course nothing can as yet be said as to the spring sowings of this year, upon the result of which the future crop will depend.

POTASH SALTS.—Prices are generally firm though not actually dearer, but the increased cost of coal, and the higher rates for labour and other factors are gradually telling upon the heavy chemicals. In Liverpool the price of Montreal *Potashes*, the supply of which was recently concentrated in one hand, is now 21s. 3d. to 21s. 6d. per cwt. *Pearlashes*, however, remain very dull of sale and can only be quoted nominally at 30s. 9d. per cwt. *Bichromate* is fairly active at 4d. per lb. *Chlorate* is firmly held, and 4¾d. per lb. is talked of, although 4½d. per lb. would probably buy. Yellow *Prussiate* is now held at 9½d. to nominally 10½d. per lb., according to brand. English refined *Saltpetre* firm at 21s. to 22s. per cwt. according to packing. Bengal quite inactive.

QUICKSILVER.—The price of the importers has not varied from 8l. 15s. per bottle, but second-hand holders have made sales down to 9l. 6s. 6d. The production of quicksilver in the Almaden mines during the year 1889 is said to have been 49,477 bottles.

QUININE.—A large business has been transacted almost daily since our last report, and the total sales which have transpired are said to amount to over 350,000 oz., though that figure is, perhaps, exaggerated. The peculiar feature of the trade is that the demand has been limited to available parcels, business for forward delivery being entirely neglected. The demand is said to have been nearly all for the United States, where unusually large spring purchases, with which the native factory is quite unable to cope, are said to be made earlier than usual this season. The parcels bought up have nearly all been cheap second-hand lots of German bulk quinine. The foreign makers themselves do not quote for forward delivery, averring that they have their hands full of orders for a long time to come. The sales we hear of have been at 1s. 3d. to 1s. 3½d. for *B & S, Brunswick, Lombarda, and Whiffen*; and at 1s. 2¾d. to 1s. 3d. for *Auerbach* on the spot; 1s. 3½d. to 1s. 3¾d. for February-March; and 1s. 3¾d. for May. We believe that 1s. 3d. would still have bought second-hand parcels to-day.

SEEDS (VARIOUS).—*Anise*: A newly-arrived parcel of 50 cases Chinese star-anise is being offered, price nominally 110s. per cwt.; Russian anise rather steadier, in sympathy with the rise in the exchange, 13s. and 21s., according to quality; *Caramay seed* very low in price and freely offering, but without interest; Dutch, 19s. 6d.; Russian, 15s. 6d. to 16s.; *Cumin seed* a little more in demand, Malta seed up to 27s. 6d. and 28s. for best quality. *Cottonseed*: spot, London, 6l. 1s. 3d., Hull, 6l. 2s. 6d.; *Fenugreek* steady at 7s. to 7s. 6d. for good Mogadore. *Linseed*: A pretty fair demand at steady rates; Dutch, 46s. 6d.; Russian, 42s.; Calcutta, arrived, has sold up to 42l., with further buyers. *Mustard seed* in good demand, and better qualities are scarce: white seed, 7s. 6d. to 11s., according to quality; Indian brown, 7s. to 7s. 6d.; and English, 12s. to 12s. 6d. per bushel. *Rape seed*: Very little English seed is now offered, and 68s. is the nearest price, brown Calcutta; spot, 45l. to 45l. 3d.

SHELLAC.—The week opened with a rather easier feeling, and prior to the auctions only a few sales were reported, of *Orange TN* for February delivery at 75s. to 75s. 6d., and for April at 76s. per cwt., and of *Garnet AC* for February at 70s. 6d., and March at 71s. per cwt. At the auctions on Tuesday the catalogues were very small, viz.:—

	Cases	Cases
Orange lac	236 of which	— were sold
Button „	9; „	33 „
	323	33

The tone at the sales was a very dull one and lower prices had to be accepted for the small quantity sold, viz., fair seconds, 90s.; darker ditto, 86s. to 87s.; dark thirds, 84s.; fair fourth, 79s. For a parcel of fine B in octagon 51. 5s. was mentioned as the price. After the auctions there were sales for delivery at a fresh decline, viz., AC Garnet for March at 70s. per cwt. Since the auctions a rather hoavy business has been done at declining prices, and to-day 1,300 cases changed hands at the call and about 400 afterwards, holders having given way to buyers. The prices were:—

			Feb.	Mar.	Apr.	May	June
Orange TN, sellers ..	--	--	400	100	100	203	74/
			at	at	at	at	—
" buyers ..	..	..	74/	74/	74/	74/	73/6
Garnet AC, sellers ..	..	..	303	200	70/0	69.6	—
			at	at			
" buyers ..	..	..	69/	69.6	68/6	65/	—

SODA SALTS.—*Asl* is firmly held at 1½d. of degree on the Tyne, and 1½d. in London. The makers are all full of orders, and there is not much to be had for immediate delivery. *Bicarbonate* in demand at 5s. 9d. For *Crystals* the demands continue to advance, and the quotations are now:—London, 57s. 6d. to 58s.; Tyne, 48s. 6d. to 49s. per cwt. *Caustic* is offering very sparingly, and the demand is rather in excess of the present output, white 60 to 70 per cent. on the spot, 8s. to 8s. 3d., cream 7s. 6d. to 7s. 7½d. *Nitrate* dull and easy at 8s. 1½d. to 8s. 5d., according to degree of purity.

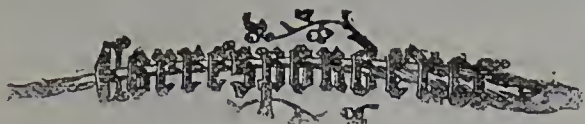
SPICES.—*Cassia Lignea*. Early in the week sales were made of 500 boxes on the spot at 22s. to 22s. 6d. per cwt., which was about the previous price. At auction nearly 1,000 boxes were bought in, 22s. being refused for good quality, and 170 bales broken *Cassia* sold at 15s. 6d. per cwt. without reserve. *Cassia Buds* quiet, at from 44s. to 47s. per cwt., according to quality. *Chillies* steady of sale, with business in medium bright Zanzibar of old import, at 30s. per cwt. *Cinnamon chips*, one or two lots quillings sold at 6d. per lb. *Cloves*: Zanzibar, several transactions are reported for arrival at rather lower prices, December-January to April-June at 4½d. to 5½d. c.i.f. terms, delivered weights, fair quality on the spot is quiet at 5½d. In Java cloves, a rather large quantity of 100 half-picul boxes was forced off at a decline; fair to fine bright at 7d. to 9½d. *Ginger*: Cochin, slow of sale and rather lower for cut, lean small, at 25s. 6d.; cuttings, 11s. to 12s. 6d.; 2 barrels new crop Jamaica, low, medium, small, scraped, sold at 82s. per cwt. *Mace* quiet, and none offered at auction. *Nutmegs* steady, but quiet. Penang (182) at 1s. 10d., good Java (82) at 2s. 8d. and 2s. 9d. *Black pepper* easier, both on the spot and for arrival; fair grey Singapore, 6½d.; heavy, clean West Coast, 6d.; for arrival Singapore January-March, 5½d. *White pepper* dull and inactive, and without sales reported. *Pimento* firm and steady; medium grey, at 2½d. per lb. *Sago*, sales without reserve have caused a further decline of 1s., fine small pearl selling at 15s. 6d., grey ditto at 14s. *Tapioca* dull of sale; fine Penang flake, 2½d. per lb.; floor cheaper, fair Singapore, 8s. to 8s. 6d.; fine white Trafalgar, 14s. to 15s.

TEA.—The *China* market is quiet, though steady, and there is no noteworthy change in quotations from those of last week. Nothing in leaf tea clean, either Moning or Kaisow, can be bought under 4½d., while teas worth pence per lb. more in comparison can be bought at 5d. to 5½d. The terminal market is depressed, and probably owing to "bear" sales quotations for January delivery have been a trifle below public sale prices—a clear indication that the trade generally troubles very little about clearing-house transactions and quotations. Some useful Panyongs have been selling, mostly privately, from 7½d. to 9d., and the finest teas do not fetch even 11d. per lb., either privately or by auction. S. Capers from 6d. to 8d. are very cheap, but fine teas are scarce, and none have been offered for some time. Green teas are lower, the heavy and continued sales having proved too much for the market, and Pingsueys at 6½d. to 10d. show capital value. *Assams* keep steady for all the lower grades, with a fair business doing. Fine Pokoe Souchong fetches 7½d., and poor liquoring Pekoe 8d., while very little useful broken can be bought below 7d., but better grades continue reasonable, and 10d. to 10½d. Pekoes are a very long way better than 7½d. and 8d. grades of tea, far more so than the difference in price would indicate. A very

heavy *Ceylon* sale on Tuesday went at easier prices for almost all sorts, common leaf fetching 9d. and some good liquoring teas being knocked down at 9½d. to 9¾d. Useful Pekoes, with quality, may be bought at 10½d.; and broken Pekoes from 11d. to 1s. show a sharp decline. There is still room for a heavy fall, but while with continued large supplies we may see a weak and dropping market, we do not look for any collapse in prices, as the demand is far too active. A break of tea from *Peral*, showing good quality, sold in auction from 6¾d. for dust, to 1s. 0¾d. for Bkn. Pekoe, and serves the *Standard* as a text from which to lament the decadence of the tea trade as a happy hunting ground for "our boys," emphasising the advice, "Whatever you do, don't put your boy into the tea trade." If the *Standard* were but to send a reporter into the Indian or Ceylon sales some afternoon, he would probably report that a good many boys are put into the tea trade yet, and about the noisiest set of boys that it would be easy to find. The deplorable condition to which, according to our well-meaning contemporary, the wholesale tea trade is reduced, would certainly seem to have very little effect on the rollicking spirits who buy, or profess to buy, the import of tea from India and Ceylon.

WAX (JAPAN).—Sales are reported at 46s. per cwt. for good pale squares.

CINCHONA-GROWING IN JAVA.—The Amsterdam *Indische Mercur* contains an article on the progress of cinchona cultivation in Java, from which we abstract the following:—The first shipment of Java cinchona bark in commercial quantities was made on September 28, 1869, when fourteen packages, weighing altogether 900 lbs., left the island for Holland. The consignment was in the hands of the Netherlands Trading Company, and that organisation called in two professors to give an opinion on the trial shipment. Their report was very favourable, and the bulk of the shipment was sold privately to manufacturers and dealers. Five of the purchasers afterwards also gave their opinions of the bark, but all agreed that, owing to its immaturity and insufficient alkaloidal contents, the cinchona was unfit for manufacturing purposes, although it would answer admirably for druggists' use. In 1870 the Java exports amounted to 41 bales and 28 cases, and on October 20 of that year the first public auction of 876 kilos. took place in Amsterdam. Up to 1883 one or two public sales were held every year; last year there were ten, and for 1890 the same number is announced again. The first private planter to commence cinchona-growing in Java was Mr. K. F. Holle, in 1866; but not until about eight years later, when the first consignments of the rich Ledger barks had been shipped to Europe and realised enormously high prices, did private planters commence to pay special attention to the article. At first the intention of the shippers appears to have been to send all the Java bark for sale to London, where a market already existed for the article; but the Netherlands Trading Company determined to create a centre in Amsterdam, and the importance which that market has now acquired demonstrates the wisdom of their decision. In 1878, when it had been shown beyond doubt that the most valuable cinchona alkaloids were found principally in the outer bark layers, the then director of the Java Government plantations, Mr. Moens, decided to adopt the system of scraping the older Ledger trees; but after some seasons the scraping was found to be injurious to the trees, and since 1886 this method of harvesting has been abandoned in the Government plantations, though it is still followed by a few private planters. At first all barks were cut to the uniform size of 20 centimetres (about 8 inches), and brought to market in quills, all bark which could not be harvested in this manner being crushed to a coarse powder. The trade in the beginning offered considerable opposition to the sale of this powdered bark, as it was believed to facilitate sophistication, and also on the alleged ground that powdered bark lost some of its alkaloidal richness by keeping. At present, however, the system of crushing bark has become universal in Java, and at the Amsterdam auctions nearly all the manufacturing barks are now offered in that condition, and the pharmaceutical barks in quills. Since 1874 it has been customary to sort the Java quill bark in two classes, according to length.



Memoranda for Correspondents.

Always send your proper name and address; we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

The Medicine-stamp Duty—The Opportunity to Abolish It.

SIR,—Now that there is a surplus revenue to be disposed of, the time is opportune for chemists to agitate for the repeal of the medicine-stamp tax. As little or nothing can be said in favour of this tax, and very much against it, chemists now have it in their power to clear out that bureau of placemen, solicitors, and spies, if they will but assert some manly independence and speak right out. If there was a stamp tax on every yard of cloth, or dozen of cutlery, or basket of fruit and barrel of flour, the ironmongers, drapers, grocers, and all tradesmen affected would not rest until the tax was abolished.

Let the chemist once see clearly that he can get as good a price for his proprietary pills and cough mixture without the stamp as with it, and then he will appreciate the fact that it is himself and not the public who pays for the stamp. Taxes upon commodities always tend to restrict consumption by enhancing the cost and limiting the number of buyers; therefore the stamp tax lessens the amount of the chemist's sales of his own and other proprietary articles, and thus reduces his profits.

The tax is bad for the consumer, for it is collected from him when he can least afford to pay it, being, perhaps, unable to attend to his usual vocation, or, if laid up with illness, having extra expenses for nursing, &c.

The tax is highly impolitic, because the national wealth is decreased when the wealth-producers are laid up with illness and their cure delayed by lack of necessary medicine on account of the expense.

There is a superstition in some ignorant minds that the stamp implies Government guarantee, and this impression is easily strengthened by any who would wish to deceive by folding the stamp so that the word "no" is covered up. I remember having seen the stamp so placed on a package of medicine, so that the information read "Government guarantee." It is a singular thing that all the large patent-medicine houses prefer to have the stamp remain, because it gives them a sort of monopoly, and places the chemist at a disadvantage in pushing his own proprietary articles. For, as already shown, a chemist can get as much for the article he sells on personal recommendation without the stamp as with it; whereas the large manufacturer, who creates a demand for his goods by extensive advertising, merely adds on the cost of stamp to cost of article, and gets a profit on the investment in both.

A chemist from Newcastle told me some months ago that a spy from Somerset House was making wholesale depredations among chemists there, and that, making an estimate of fines paid by a few neighbouring pharmacists, this man was really making more money out of his occupation than any chemist in town.

It appears that the authorities at Somerset House are becoming more and more aggressive every year, and that they now require articles to be stamped which were regarded as free some months and years since. By such activity they may be cutting their official heads off and digging their official graves. They are not exactly the masters of the chemists and of the general public, which they sometimes fancy themselves, but the paid servants. Instead of cringing to

them, according to the habit of some chemists, if a manly independence be shown, due deference and courtesy will be accorded. The patent-medicine stamp is an aid and abettor of quackery, a disgrace to legitimate pharmacy, a robbery of the sick, and a relic of landlord oppression. To get rid of the nuisance is easy and simple. Let every chemist write to his Member of Parliament, asking him to propose the repeal of this tax, and let him ask friends to do the same. Let someone go to work and get up a petition for people to sign, showing the oppressive nature of the tax, and asking for its removal. Any chemist in favour of this should contribute his shilling or half-crown towards the expense of printing copies of the petition, which should be sent to every chemist desiring to have one, or, perhaps, to every chemist in the kingdom.

There was never so good, and never will be a better, time to move in this matter, and steps should be taken at once, before the assembling of Parliament. Chemists who contribute towards the expenses can have their names identified with it or not, as they like.

Who will volunteer to be secretary and treasurer or on the executive of the League for the Abolition of the Medicine-stamp Tax? Let him write to THE CHEMIST AND DRUGGIST, and, if they will allow us to do so, let their office and journal be our means of communicating with each other in our own or in assumed names. Let our motto be, "Turn out the spies."

Yours truly, and in confidence of the justice and triumph of our cause,

JOHN JONES OF JONESVILLE.

Address (without their permission, by the way), in care of THE CHEMIST AND DRUGGIST.

Not Obsolete.

SIR,—Your correspondent "Tyx" is in error when he states that Wright's pearl ointment is obsolete. I have sold it during the past thirty years, and my predecessor sold it for many years. I sold a pot a short time since. It is in white-glazed covered pots with convex lids; was first introduced by Dr. Wright, an eminent physician of Stafford. In 1834 he disposed of the recipe to Zaccheus Hunter, of London, grandfather of the present and sole proprietor of Dutch drops. Daffy's elixir, Snooks's pills, Jenkins's salve, British oil, Bateman's drops, and Wright's pearl ointment are not yet things of the past; with old customers they are still old favourites.

Yours faithfully,

Saffron Walden, January 27.

HENRY MACHON.

Administration of Nitrous Oxide Gas.

SIR,—The Hyderabad Chloroform Commission and its unexpected verdict suggest to me the writing of a note on the safe use of gas by dentists. I do not know that I have anything new to say, or an unusual circumstance to chronicle, but a hint may be given to some diffident man who is too nervous to run the risk of using nitrous oxide gas in dental operations.

It is, I believe, the custom to continue the administration of gas until the medical attendant considers that unconsciousness has been produced. This is the opportunity for the only "true and genuine" painless dentistry; and probably the dentist would be disposed to grumble, if, in his opinion, the surgeon stopped the inspiration at a point short of this.

A local surgeon, whom I lately engaged to superintend three cases of extraction, stopped the gas, according to his practice, just as soon as the patients became helpless, and before the anaesthesia was complete. During the extraction the patients felt what they described as a "grabbing," but the sensation did not amount to a positive pain. This surgeon is one of the ablest men I know, and certainly the most cautious.

Chemists who, like myself, practise dentistry, will be fortunate in securing the help of a man who takes the administration of the gas into his own control, for it is sometimes remarked that the medical man merely looks on as an interested or an amused spectator.

As one who gets through a fair number of extractions every week, I shall be glad to know what is considered the

best guard for preventing the swallowing of the extracted tooth, which so frequently flies out of the grip of the forceps. I have not a very good opinion of the wired spoon.

Yours truly,
HEDER.

The Chemistry of Soap.

SIR,—In support of Blondeau & Cie.'s statement regarding the di-fatty soap molecule, I find in Kingzett's "Alkali Trade," page 174, this sentence: "Soap is a polybasic salt, capable of resolution into a less basic or more acid salt, and free base." Upon this is founded the statement made by the same author, "a soap may be said to be commercially a body which on treatment with water liberates alkali." Yours,
F. C. S.

Surgery in the Pharmacy.

SIR,—Just a wrinkle for my *confrères*. A woman came to my shop with her hand streaming with blood, from which she nearly fainted. I gave her a draught, dressed the hand with solution of carbolic acid, and told her to come next day, when the hand could be strapped up. It looked in good condition, and was strapped. She went off, and in about a month's time she informed me that her finger had been improperly treated, that she had gone to the hospital, and they told her it must be amputated; and that if I did not recompense her for the mischief I had done, she should apply to her lawyer. Well, to make short of it, I received the legal document asking for 10*l.*, or an action would be proceeded with at once. My lawyer advised me to pay 5*l.* and costs, which was accepted. "Cave!"

F. W. U. (234/51.)

Synonyms: "Blue Ointment."

SIR,—Referring to "Notes on Synonyms," by John Findlay, in your issue of January 18, would it not be incorrect to insert "Blue Ointment" as the synonym for ung. hydrarg.? I have always understood that "blue ointment" is ung. hydrarg. *mitius*. At any rate, this is what people usually require when they ask for "blue ointment," and at every establishment where I have been it has been supplied as such.

Yours faithfully,
YORKSHIRE. (264/27.)

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Tr. Quin. Ammoniat. Mixtures.

On adding aq. dest. to the tincture (or *vice versâ*) the quinine remains for some time in a state of fine division. I only find it aggregate after a day or two's standing.

ERUV.

229/64. *Pompeii*.—Potas. Citras and Ferri et Quin. Cit. in Mixtures.—Similar prescriptions to yours are explained in "The Art of Dispensing," where it is pointed out that the addition of a few grains of citric acid gives a clear mixture.

Bismuth and Inf. Rosæ.

SIR,—The answer of Mr. John Smith to the query of "Theseus" is a case of "pot calling the kettle black." Simple infusion of roses is undoubtedly intended.

A. H. (235/66.)

SIR,—I cannot agree with "Heder" that the prescriber probably intended other than the B.P. inf. rosæ to be dispensed. I am of opinion that he did not remember at the time of writing the prescription that the infusion is acid. My experience of medical men is that much of their pharmacy

is forgotten, and this in proportion to the length of time which has elapsed since their examination in that subject. A few days ago I had a prescription to dispense containing tr. ferri perchlor. and sp. ammon. co. If "Heder" were to see my prescription-book, I think he would agree with me.

Yours truly,
THESEUS. (234/38.)

[Old prescribers got the same results from the iron and ammonia mixture as modern ones now get from dialysed iron.—ED.]

The Illegible Prescription.

Up to Wednesday morning we had received a large number of post-cards translating the prescription which was given last week. The following are a few examples:—

Lin. belladonnæ	3j.
Oli. bovin. recent.	3iv.

M.

Belladonna liniment	Oz.
Fresh beef marrow	4

Mix.

J. B.

Lin. belladonnæ	3j.
Olei bovin. rectis	3iv.

M.

H. R. LOWTHER.

Belladonna liniment	3j.
Extract of belladonna root (alcoholic)	3iv.

JOHN HEELY, Junr.

Lin. belladonnæ	3j.
Olei lavand. rectis	3iv.

M.

Probably oil of spike or some cheap lavender oil.

ERUV.

Lin. belladonnæ	3j.
Olei tereb. rectific.	3iv.

M.

THESEUS. (234/38.)

Liniment of belladonna	Oz.
Neat's foot oil (oil of the foot of the ox or calf!)	4

Mix.

The Latin of the second word of the second line is, to my thinking, more canine than bovine.

PADDY FROM CORK.

The following agree with the last translation:—J. M. Rogers, T. F. Walker, Quærens, W. B. Rainhow, C. S. Ashton, T. C., T. Llewellyn, A. Duncan, S. Adamson, J. Smith, P. Hall, G. W. Harris, Headland, Hohbonkey, F. R. Duddridge, Bartholomew, R. A. Tigon, H. Blade, H. R. Duncan, J. Dove, F. D. Crossley, A. Hartshorn, J. H. Gradidge, G. W. Stevenson, J. B. Purvis, R. Bird, F. W. Sumner, Heder, Jackson & Son, G. Pringle, Taylor & Cuthbert, A. J. M., A. Peake, E. Howard, Marius, Bos, C. Crook, J. Ferguson, T. J. Addis, A. P., J. G. Agar, J. M. Howes, Ernest L. Thomas, J. H. Twert, E. H. Dyer, Highland, H. Clark, J. Findlay, Edmund Lawrance, J. H. Williams, H. Walker, John Heely, Country Bumpkin, A. Hall, and C. L. Taylor.

LEGAL QUERIES.

233/40. *P. W. T.*—The Dentists Act does not prevent unregistered persons undertaking dental work or performing dental operations. But they are liable to a fine if they take or use the title of dentist (either alone or in combination with any other word or words), dental practitioner, or any name, title, addition, or description implying registration or special qualification.

228/71. *Fibrin*.—Our previous answer remains. If the ease was *bonâ fide* lent by B to A neither the landlord nor C has any right to retain possession of it.

231/2. *Abolitionist* says the following label was adjudged "not liable" when submitted to the Board. of Inland Revenue:—

CHILDREN'S COUGH AND BRONCHITIS MIXTURE.

Doses : Under 3 months old, 15 drops ; between 3 and 12 months old, half a teaspoonful ; between 1 and 3 years old, a teaspoonful ; over 3 years, 1 to 2 teaspoonfuls.

Repeat every three hours until relieved ; in severe cases every one and a half or two hours.

Prepared by BLANK, Chemist.

"Abolitionist" cannot understand how "Heder's" label for concentrated solution of camphor can be any more liable. There is a marked difference. The directions on "Heder's" label ran, "Two or three drops on sugar every fifteen minutes, less frequently when relieved." There was a distinct assumption that relief would follow. In the cough mixture label we are only told to repeat the dose "until relieved," which may never be.

229/3. *Doubtful* says in his town the telephone company tell him they can prevent him putting up and using a wire between his two shops with any kind of telephone. Our correspondent does not give sufficient particulars of the name of the company, and when they were established, and other matters, to enable us to give a definite answer to this query. There is no doubt the United Telephone Company, from whom nearly the whole of the telephone companies are licensees, have a monopoly in the Bell telephone, and that is, no doubt, what they refer to when they say they can prevent our correspondent putting up a telephone. In the absence of an Act of Parliament, there would be nothing to prevent our correspondent using the pulsometer telephone, for instance, and connecting his two houses by wire. If the telephone company could prevent him putting up a wire for a telephone, they could also prevent him putting one up for a telegraph instrument. We should advise "Doubtful" to inquire of the postmaster, as he would probably be able to assist him, as the telephones only exist by permission of the Postmaster-General.

234/65. *F. D.*—Homœopathic tincture of aconite being "a preparation of aconite" is a poison in Part 1 of the Poisons Schedule, and its sale should be registered in the poison-book.

230/22. *S. C.*—Our correspondent does not say how long he has used the mark that he proposes to register. If he used it before August 13, 1875, he is entitled to register it, notwithstanding the opposition. If he did not use it before that date, neither he nor his opponent is entitled to register, as the words "Khush Bo" are not capable of registration, not being fancy words. They are merely foreign words having a distinct meaning, and, moreover, descriptive of the article to which they are attached, both of which are fatal objections to it. Even if they were not descriptive, being foreign words having a definite meaning they are not entitled to be registered, having regard to the decision of Mr. Justice Chitty in *re* Burgoyne's Trade-mark, decided last year. In that case an application was made to register the word "Oomoo," an Australian aboriginal word in respect of Australian wines, but registration was refused. A very simple way out of the difficulty will be to disclaim the words "Khush Bo" as an essential part of the trade-mark, and simply register the design. If the opponent tries to register, then our correspondent can oppose on the grounds above stated. There is no fear of any prosecution for infringement of the label. It is possible that the rival firm have acquired a right by user, apart from the question of trade-mark, and the test always is whether anybody is likely to be deceived into accepting one preparation intending to buy the other. This question has not at present been raised between our correspondent and his opponent, but it would be desirable

that the get-up of the two preparations should be so dissimilar that no person (even one of less than ordinary intelligence) could by any possibility be deceived.

234/66 *H. B.*—There is nothing illegal in a corporate body taking an apprentice and undertaking to teach him the business of a chemist and druggist. The Pharmaceutical Society have nothing to do with the indenture. The regulations require that a candidate for the Minor shall produce a certified declaration that for three years he has been practically engaged in the translation and dispensing of prescriptions, and we believe they expect this certificate to be signed by a registered chemist or medical practitioner ; but the latter need not necessarily be the candidate's master.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulæ and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

218/34. *W. A. W.*—Indiarubber-stamp Inks.—See October 26, 1889, page 600.

232/40. *W. Lee.*—Syrup. Camphor. Co.—See January 11, page 60.

232/18. *Bos.*—Danish Butter Colouring.—See August 25, 1888, page 260.

227/17. *Attraction.*—Syr. Ferri Phos. Co., B.P.C.—See December 7, 1889, page 813. This is really Martindale's.

229/4. *Quinine.*—Warburg's Tincture.—Formula March 16, 1889, page 383.

229/7. *J. A.*—Soy.—Formula June 9, 1888, page 764.

222/32. *Rubber Stamp.*—Black Stamp Ink.—Dissolve 1 drachm of black wool-dye in 6 drachms of methylated proof spirit, and add 2 drachms of treacle or glycerine.

223/44. *H. B. Pare.*—Beef and Malt Wine (with coca):—

	Oz.
Fluid extract of malt	4
Extract of beef	1
Fluid extract of coca	$\frac{1}{2}$
Tarragona port to	40

Digest together for two days, and filter.

It is preferable to detannate the wine by macerating a drachm of gelatine in it for a few days before using it for this preparation.

222/72. *W. F. G.* sends us a 1s 6d. box of a Resister for cleaning mirrors, windows, and the like, one of its properties being (said to be) that it keeps the glass undimmed. We fail to see why, for analysis shows that the white powder is soda ash, with a considerable trace of sulphate and chloride. The boxful (about 1 oz.) makes half a gallon of cleaning fluid with hot water.

250/50. *T. J. A.*—What department of practical electricity do you wish to begin with?

161/90. *B. & S.*—We cannot give an opinion on the sample of yeast. Your customer ought to pay for that, and we do not analyse for fees.

224/73. *W. R. F.*—**Ung. Hydrarg. Oxid. Rub.**—It has been experimentally proved that the paraffin basis is not so active as saponifiable fats in reducing the mercuric oxide. Ung. cetacei is not so good a basis as ung. simplex, because of its irritating properties.

201/90. *Syr. Hypo. Co.*—You do not say which of the two formulæ you have used; but the sample is similar to what we have obtained from the first.

226/4. *Pruno.*—You do not say what kind of insecticide you wish, or what it is to be used for.

226/22. *Dancy.*—**Magnesium Oxychloride** is made by adding calcined magnesia to a concentrated solution of magnesium chloride. The oxychloride forms into hard, cement-like lumps. Is it this property upon which you base your second query?

225/34. *W. A. L.*—In our issue of December 14, page 845, you will find a rule for estimating the contents of cylinders. This would do for a rough estimation of barrel content.

226/31. *Scenophorc.*—See our issue of November 2, page 642.

226/2. *Railton.*—The plant is the common butcher's broom—*Ruscus aculeatus*.

255/17. *A Country Chemist.*—(1) Paragoric substitute is tr. camph. co. without opium. (2) **Indian Cerate.**—See our issue of February 16, 1889, page 250.

220/66. *T. A. H.*—**Phosphorised Quinine and Iron Elixir.**—For this we should put up a mixture of Easton's syrup, such as the following:—

Easton's syrup	1 oz.
Syrup	2 "
Tincture of calumba	1 "
Spirit of chloroform	$\frac{1}{2}$ "
Water, to	6 "

Dose: A tablespoonful.

"**Medical Dispenser under Government Licence.**"—This is the style adopted on his labels by a correspondent as preferable to "Pharmaceutical Chemist," which he is entitled to use. He considers from experience of both that the former is better appreciated by the public.

228/41. *Chemist.*—We do not know of any provident association for chemists. The Benevolent Fund of the Pharmaceutical Society provides assistance for distressed chemists, their widows, and orphans, but its benefits are not available to Irish chemists.

187/9. *Pax (Paris).*—**Laundry Blue.**—The best liquid blue is made from Prussian blue and oxalic acid. The proportions to use are 1 oz. of the blue and $\frac{1}{2}$ oz. of acid to 50 oz. of water. The blue should be in powder, and with the acid should be made into a paste with 5 oz. or so of boiling water before being diluted. We are aware that with many commercial kinds of Prussian blue this method does not give satisfactory results, some samples of blue being quite insoluble. But, on the other hand, the Prussian blue which goes by the name of Chinese blue, and is made by colour manufacturers for this purpose, has always given us satisfactory results. Your best plan is to get samples from different houses, and find out by experiment which one suits your purpose; then stick to it. Cheap blues are never satisfactory. (2) We presume that by "household colours" you mean dyes. These are simply solutions of aniline colours in water, with the addition of a little acetic acid or glycerine, according to the nature of the colour.

225/15. *A. B.*—The oil used in **Printing Stoneware Pottery** seems to be a mixture of linseed oil and coal tar.

226/10. *C. B. M.*—(1) As previously stated, it is not possible to name the ingredients of the specific for drunkenness. (2) A register of chemists and druggists is published by the Registrar under the Pharmacy Act, which is a different thing from the list of the members, &c., of the Society. It can be obtained for 5s. from the Registrar, 17 Bloomsbury Square, W.C.

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

232/16. Maker's name of the sword brand of universal Putz pasta made in Berlin.

229/40. Who are makers of nickel-plated cisterns, suitable for making perfume in, to hold about 8 or 10 gallons; also the probable cost of same, and experience of use of.

A. F. has had a recipe for "old Tom" to compound. In it are "oil of old Tom" and "essence carob." Where can these be obtained?

[The "carob" is a fruit largely imported into London from Sicily, which is chiefly used in this country for cattle-spice. It is obtained from the St. John's bread tree, *Ceratonia Siliqua*, L.]

233/69. What chemical is used by bill-posters for painting over tarred surfaces to make the paste stick?

233/56. Who are English agents of "Baker's Tripoline," a polishing paste made by Matchless Metal Polish Company, Chicago?

229/21. *Eastern* asks if there is a hashish shop or den in London.

234/37. Maker of electro-silicon powder formerly residing in Liverpool Road, N.

233/65. What is the best kind of tank for holding strong solution of caustic soda, and where can such be obtained?

Information Supplied.

Irish Slate, or lapis Hibernica, or tegula Hibernica, is an argillaceous slate said to contain iron and sulphur. It is found in different parts of Ireland in masses of bluish-black colour, which stain the hands. When exposed to the fire it acquires a pale red colour and emits a sulphurous smell. The powdered slate is sometimes administered by the poor as a remedy for internal bruises.—**ERNEST ALDRIDGE**, 131 King's Road, N.W.

In "Gray's Supplement," 1847 edit., Professor Redwood says, respecting Irish slate:—"An argillaceous slate said to contain iron and sulphur. It is found in different parts of Ireland in masses of a bluish-black colour which stain the hands. When powdered it has a light bluish tint, which becomes darker with keeping. When exposed to the fire it acquires a pale red colour and emits a sulphurous smell. The powdered slate is sometimes administered by the poor as a remedy for internal bruises."—J. D. (232/10.)

Irish slate was used very much thirty years ago for pains in the back. It was given in gin or tea, and believed by those who took it to be an infallible cure; strange to say, I have been asked several times lately for it. It is the pulvis lapis putris, or commonly called rotten stone.

L. ARROWSMITH.

Leather Button, I should say, is nux vomica seeds.

J. D. (232/10.)

Leather buttons, thirty years ago, were called poison-buttons, and were used to poison dogs, but fortunately were only known to a few of the dog fanciers. We were not often asked for them. It was nux vomica; as to size and colour, you will find a copious description in British Pharmacopœia.

L. ARROWSMITH.

[Similar replies to the foregoing have also been received from other correspondents, whom we thank.—ED.]

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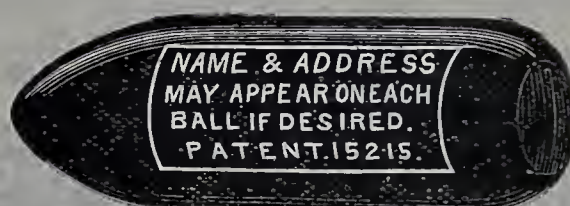
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(Signed) EDWD. T. TOWLE, Nottingham.

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Absolutely pure. The original preparation, invented and introduced to medicine by Mr. Schacht in 1855. Its distinct superiority is universally admitted. In $\frac{1}{2}$ lb., 1 lb., 2 lb., and 5 lb. bottles. Dose: 1 drachm diluted. When ordering, please to specify "SCHACHT'S."

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Contains pure Bismuth and *Pepsina Liquida* in combination with sedatives. A formula most serviceable in the treatment of gastric pain. In 4 oz., $\frac{1}{2}$ lb., and 1 lb. bottles.

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A standard preparation, of definite alkaloidal strength, containing the entire medicinal properties of the finest Cinchona Bark. It is, in fact, *Bark minus the woody fibre*, and its efficiency has been proved by careful medical enquiry. Dose: Ten to sixty drops.

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N.B.—*Peps. Liq. c. Bismutho Co.* contains, in addition, one gr. soluble *Euonymin* in each drachm.

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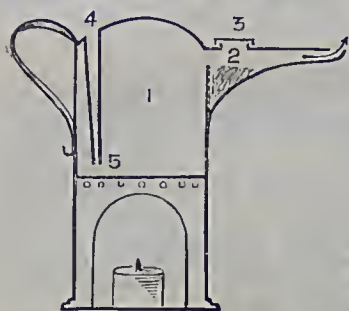
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Four Pennyworth in a Metal Box.

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PERFECT IN PURITY AND UNIFORM IN STRENGTH.

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Obtained by the action of Metallic Zinc on Chloroform and Alcohol.
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Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.

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For producing Local Anæsthesia.

In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.

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First introduced as a Medicine by Dr. RICHARDSON.

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For promoting the Healing of Wounds by the first intent! In 2-oz. and 4-oz. Bottles, with Brush, 2s. 6d. and 4s. 6d.; 16-oz., 12s.

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Containing Pure Vegetable Ivory Charcoal.

In Boxes, 2s. 6d. each.

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**Coca
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**Tablets
Lozenges
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whence will be forwarded to any applicant a Pamphlet containing the testimony of eminent British and Foreign Medical Authorities to the invaluable properties of the Coca Preparations.

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Coca Tablets and Lozenges in boxes, **1/-, 2/6, & 4/-** per Box.

Coca Elixir, **3/-** per Bottle.

Coca Tea in tins of 1 lb. **4/-**, $\frac{1}{2}$ lb. **2/-**, $\frac{1}{4}$ lb. **1/-**.

COCA TOBACCO.

We take this opportunity of thanking the numerous Chemists all over the Kingdom who patronised us and sold our Coca Tobaccos. We now beg to inform them and the Trade generally that, the difficulty with the Customs having been satisfactorily settled, we are now prepared to execute all orders entrusted to us for these Tobaccos, with our other preparations of Coca (as above), which are now commanding a ready sale.

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CAN BE OBTAINED FROM ALL WHOLESALE HOUSES.

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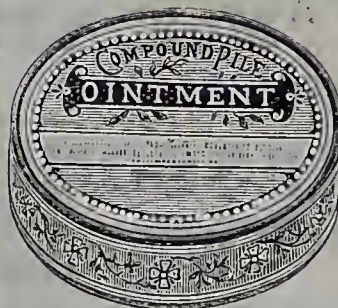
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Compound Pile Ointment.

This Article, ready put up for Sale, having proved to be a want, we have added it to our list of Counter Adjuncts. It is made from an admirable form.

Ingredients—Galls, Opium, Carbolic Acid, Belladonna, Hamamelis, &c.

Style—One ounce flat, shouldered, silver-coloured tins, bearing artistic label and band in two shades of blue and white.

Price—6/-; 3 doz., 5/9; 6 doz., 5/6 per doz. To Drug a/c



TOOTHACHE DROPS.

A good Toothache Essence is a saleable article in most districts. We have, therefore, decided to put one up as a Counter Adjunct.

Ingredients—Creosote, Chloroform, Peppermint, Cloves Camphor, Carbolic Acid.

Style—One drachm and two drachm vials, with direction labels, enclosed in neat square-shouldered cases, with effective label, suitable for Chemist's name and address.

PRICE—6d. size, 3/3; 6 dozen, 3/-; 1/- size, 6/6; 6 dozen, 6/- per dozen. To Drug a/c.

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THE ONLY GENUINE MINT ALCOHOL IS

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MINT ALCOHOL.

Recommended by the highest Medical Authorities for Indigestion, Stomach Ache, Heartburn, and Headache. It dispels immediately all uncomfortable feeling. Indispensable during the hot weather. An excellent article for the Toilet and Teeth. A grand Preservative during periods of Epidemics.

53 AWARDS, of which 15 are Diplomas of Honour & 14 Gold Medals. DEPOTS EVERYWHERE.

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PURE CARBONATE OF LITHIA

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MERCURIALS

Calomel, Corrosive Sublimate, Oxides, &c.

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Chloral, Terpene, Osmic Acid, Tannin, Tartar Emetic.

LIQUID CHLORIDE OF METHYL, for the treatment of Rheumatism, Neuralgia, &c.

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N.B.—Stock of the above kept in London.

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OF THE BRITISH PHARMACOPŒIA AND OTHER STANDARD AUTHORITIES

McKESSON & ROBBINS,

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NEW YORK, U. S. A.

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Supplied by the Principal Wholesale Houses in the Trade throughout Great Britain and Ireland.

The reputation of Gelatine-Coated Pills has been created by our manufacture.	DOZ. BOTTLES containing/containing		Being completely sealed, all substances are perfectly preserved from oxidation.	DOZ. BOTTLES containing/containing	
	25 PILLS.	100 PILLS.		25 PILLS.	100 PILLS.
Aloin	5/	16/	Quinine, Bisulphate.....	5/	16/
"	6/	20/	"	5/	16/
"	7/	24/	"	5/6	18/
"	11/	40/	"	7/8	28/
" Compound	7/	24/	"	9/8	34/
" and Strychnine	7/	24/	"	11/8	42/
" Strychnine and Belladonna	7/	24/	" Sulphate	5/	16/
" or Aperient, No. 1 (Clark)	9/	32/	"	5/	16/
" " No. 2, No. 3, No. 4	7/	24/	"	6/	20/
Morphine Nuriate	7/	24/	"	8/	28/
"	9/	32/	"	10/	36/
Narcotic Extracts (Brown-Sequard)	15/	56/	"	12/	44/

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In ordering, be careful to specify "McK. & R." CAPSULE^D PILLS.

Originated 1870, by McKESSON & ROBBINS, New York, U.S.A. Merchants, Shippers, and the Wholesale Houses in the Trade are supplied by Messrs. S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, London, E.C.; Messrs. BURROUGHS, WELLCOME & CO., Snow Hill Buildings, London, E.C.; and Messrs. HOCKIN, WILSON & CO., 38 Duke Street, Manchester Square, London, W.

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The Relief and Cure of Coughs, Colds, Bronchitis, Whooping-Cough, Loss of Voice, Difficulty of Breathing, and all Affections of the Chest Throat, and Lungs.



PRICE 1s. 1½d. and 2s. 9d. PER BOTTLE.

Sold by all Chemists and Patent Medicine Dealers.

THE PURE MALT CO.'S EXTRACT of MALT

A Nutritive and Digestive Food.

THE PURE MALT CO.'S EXTRACT of MALT

Prepared in vacuo from Barley, and Peptonized.

THE PURE MALT CO.'S EXTRACT of MALT

A Powerful Aid to Digestion.



Retail—6d.	1/6	2/10	10s.	6d.
Wholesale—				
4/- per doz.	12/- per doz.	22/- per doz.	7/- per doz.	4/- per doz.

A SAMPLE BOTTLE OF EACH SIZE WILL BE SENT, CARRIAGE PAID, ON RECEIPT OF TRADE CARD AND 4/3 P.O.O. OR STAMPS.

BEING prepared in vacuo, by an approved method, it contains in a highly concentrated form the nutritive and digestive properties of the best Malted Barley, CARBO-HYDRATES, PHOSPHATES, and ALBUMINOIDS. Extract of Malt is pronounced to be one of the best digestive agents in all cases of faulty assimilation of the elements of nutrition. It derives its efficacy from a combination of all those valuable materials contained in the choicest malted barley. These powerful substances, resolved into dextrine and soluble malt sugar, do not ferment or produce acidity in the stomach, but are easily assimilated into the system. It also contains those natural saline compounds, PHOSPHATES of SODA, POTASH, LIME, &c., so necessary to the well-being of the system, in giving tone to blood, nerve, and brain; altogether nourishing and building up the constant waste of tissue and energy.

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and also the various Formulæ of the Special Preparations of

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they are prepared to execute orders for the same, and pledge themselves to supply them in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

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The Best and Safest Medicine for all Disorders of the Liver and Digestive Organs; also invaluable in all Female Complaints.

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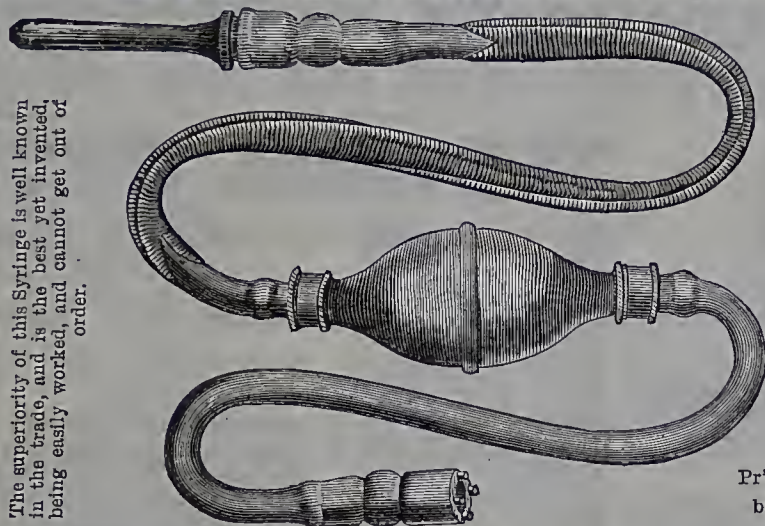
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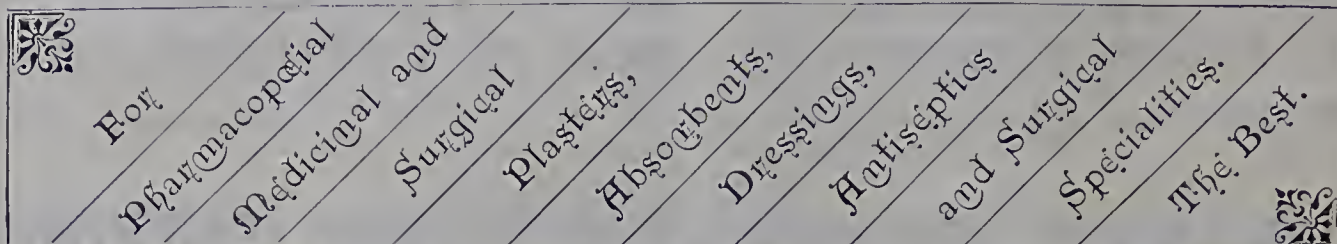
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SOLE AGENTS FOR DR. WARLONT'S CALF VACCINE.

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes, two-thirds full, 1s. 8d. each; Tubes one-third full and Lancet-charged points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small Points, 5s. Tubes, two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Ejectors, 1s. 3d. each, including postage. Vaccinations by appointment. P.O.O.'s (including postage, and crossed London and Westminster Bank) with orders, payable to EDWARD DARKE Secretary
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Felt Appliances, Obstetric Binders,
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Any difficulty in procuring the "Eureka" Brand of goods from you
Wholesale Houses, apply direct for name of nearest Agent.
ESTABLISHED 1840.

FACTS SPEAK FOR THEMSELVES!

Results of a voting recently held in the pages of the *British and Colonial Druggist*, as to the most popular makers of the various articles sold by Chemists, reveal the following indisputable facts under the heading of **Menthol Cones**:—

Votes for—

Hockin, Wilson & Co. 65
Christy & Co. 63
Maw 28
Castle Brand 5

161

Votes for—

Shirley's

A1 Brand 644

So that out of 805 votes, **SHIRLEY'S BRAND** obtained **80 per cent.**, whereas all other brands put together obtained but 20 per cent., or comparing each brand separately, **SHIRLEY'S** obtained—

Nearly 10 times as many votes as	Hockin, Wilson & Co.'s.
Over 10 " " "	Christy & Co.'s.
" 23 " " "	Maw's.
" 128 " " "	Castle Brand.

THE REASON IS SIMPLE.

Every endeavour has always been made to assist the retailer in selling

SHIRLEY'S A1 BRAND MENTHOL CONES,

By giving away Show Cases, Dummy Cones, Handbills, &c., the latest in this way being "THE LITTLE CRIER."



This Elegant Bisquit-China Figure, an Ornament to any Shop,

GIVEN AWAY

To Purchasers of 25/- worth of

SHIRLEY'S A1 BRAND MENTHOL,

Or two if 40/- Order is Placed.

The following special parcels have been arranged to suit all classes of trade:—

Parcel 1, 25/. 4 doz. 2d., 1 doz. 3d., 2 doz. 3d., 3 doz. 4d., 2 doz. 6d.

Parcel 2, 25/. 4 doz. 6d., 2 doz. 4d., 1 doz. 1s.

Parcel 3, 25/. 3 doz. 3d., 2 doz. 1s., 1 doz. 4d.

Parcel 4, 25/. 1 doz. 9d., 2 doz. 1s., 3 doz. 1s. 6d.

By calculating what each of the parcels would realise when sold, it will be found that they yield an average profit of 50 per cent. to the retailer on his outlay.

Parcel 5, 40/. 4 doz. 2d., 2 doz. 3d., 3 doz. 3d., 6 doz. 4d., 4 doz. 6d.

Parcel 6, 40/. 5 doz. 6d., 3 doz. 4d., 2 doz. 1s.

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Parcel 8, 40/. 4 doz. 1s., 2 doz. 9d., 3 doz. 1s. 6d.

1d., 2d. and 3d. MENTHOL CONES for those who are obliged to sell cheap shapes.

No. 110v. 1d. Vase shape, 3 doz. on a card. 7/6 gross.

No. 114. 2d. Varnished Pedestal shape, 3 doz. on card. 16/ gross.

No. 115. 3d. Varnished Draughtsman, 2 doz. on card. 20/ gross.

A1 COCAINE MENTHOL TOOTHACHE TUBE.

Sells splendidly; 12 on a card, 3/6 dozen.

SHIRLEY'S

20/ CASE OF SMELLING BOTTLES.

Order one of these cases and you will not regret it. The case is lined with maroon velvet, and has a mirror back. The goods can be got at from the counter, as the case opens from the back. You can rely on a good assortment of bottles being sent you.

ARTHUR W. SHIRLEY, 55 FARRINGTON ROAD, LONDON, E.C.



PASCALL'S GOLDEN MALTEX

PATENTED.

Contains 25% of Allen & Hanburys' Extract of Malt.

A NOVEL CONFECTION. MOST SALEABLE.

Delicious Flavour. Brilliant & Attractive Appearance.

SELLS AT SIGHT.

Vide Dr. Tanner's Report, and The Chemist and Druggist, April 20th.

1/ Bottles, 9/ per doz.; 1-lb. Bottles, 20/ per doz.; and in 4-lb. Jars, 1/6 per lb.

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JAS. PASCALL, BLACKFRIARS ROAD, LONDON, S.E.

PERFUME SPRINKLERS,

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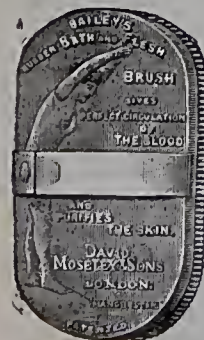
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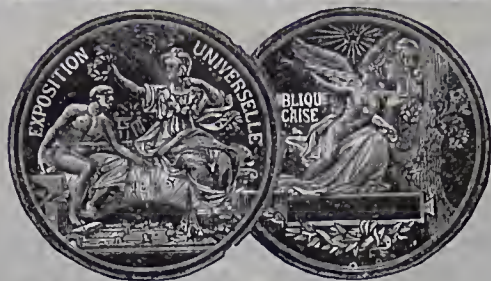
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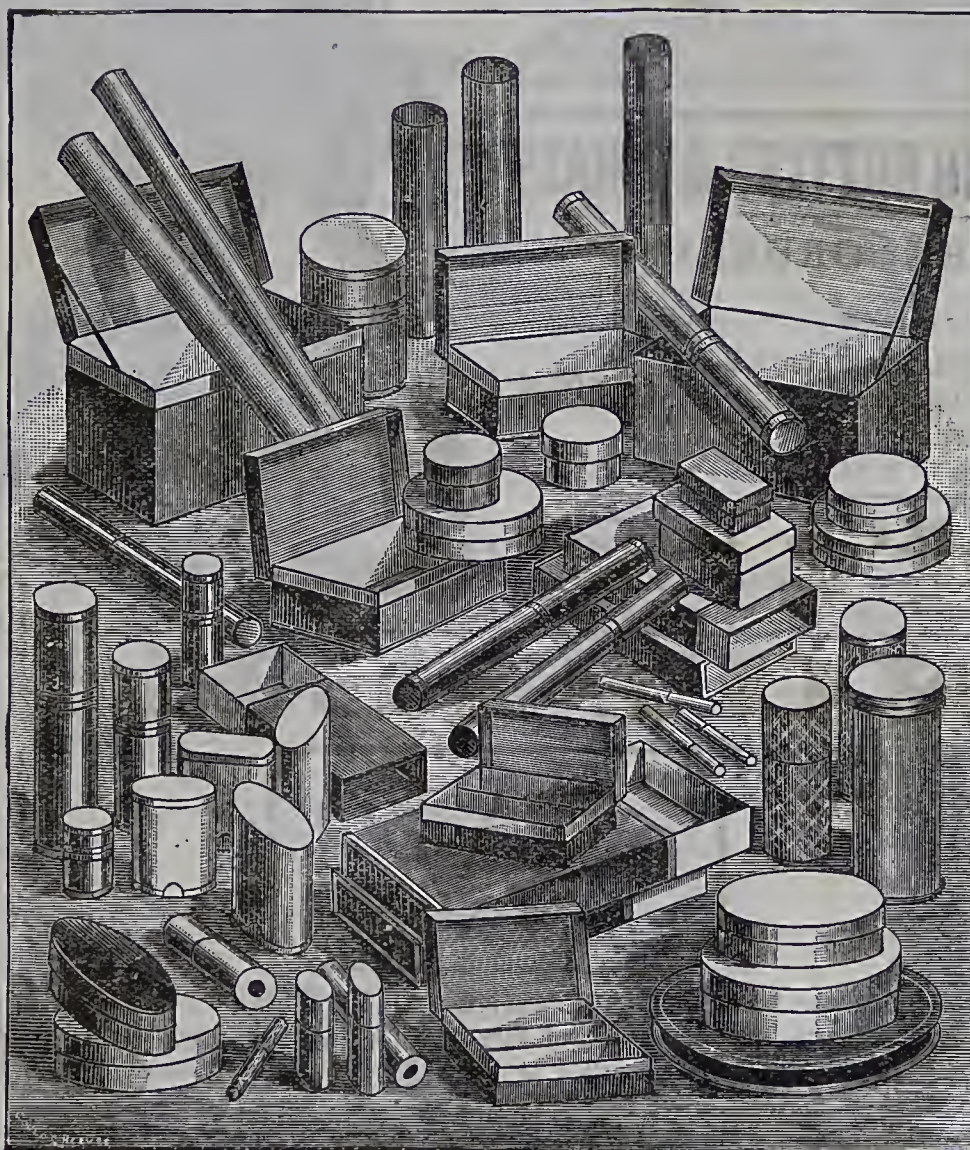
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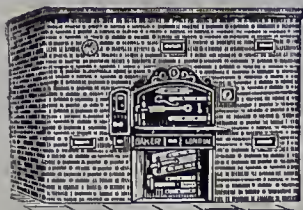
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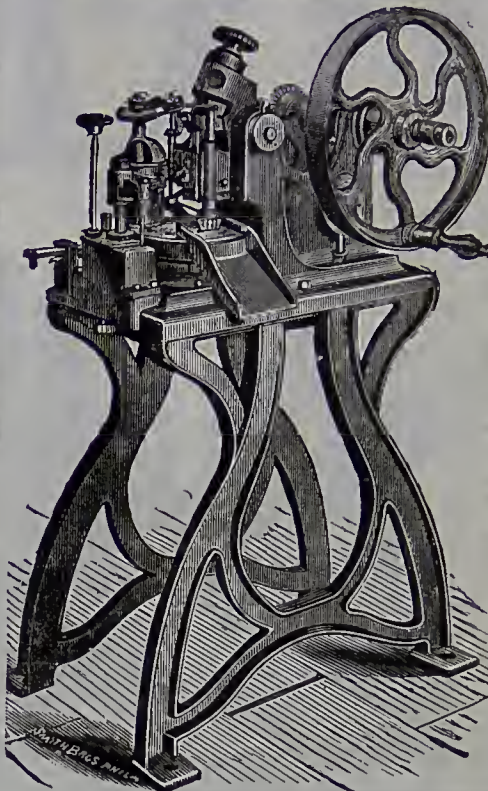
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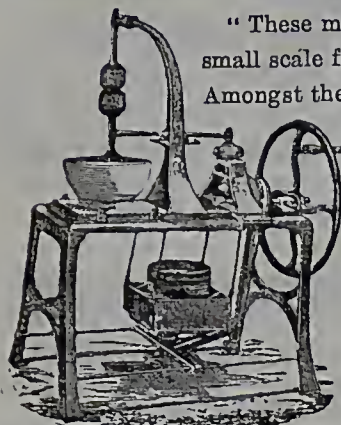
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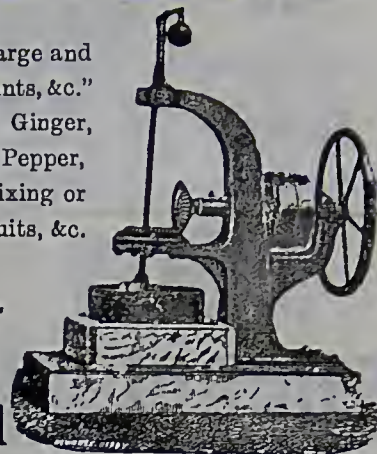
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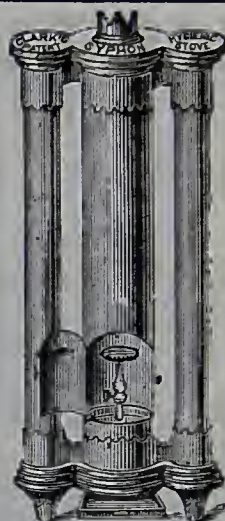
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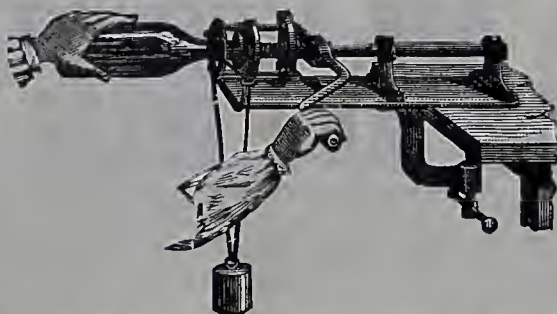
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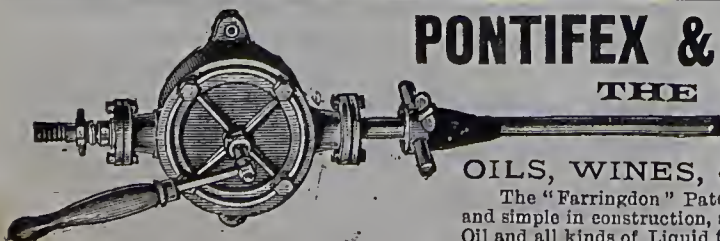


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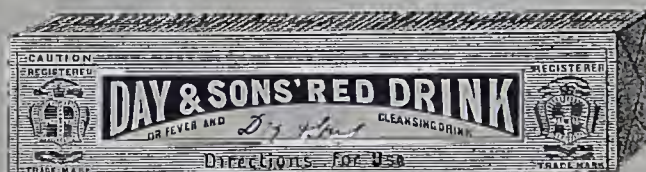
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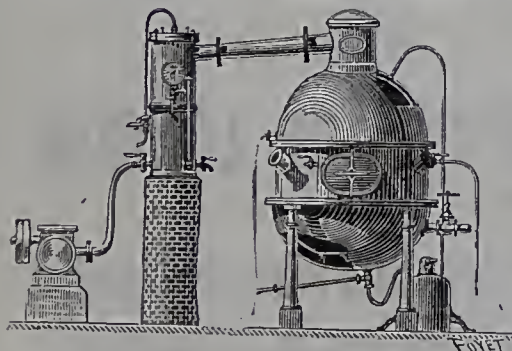
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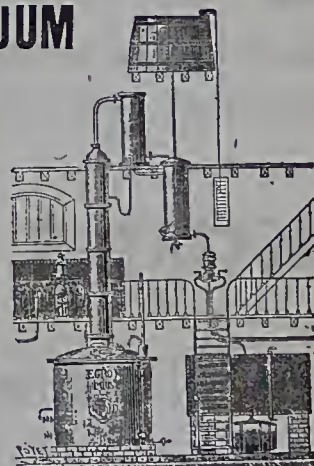
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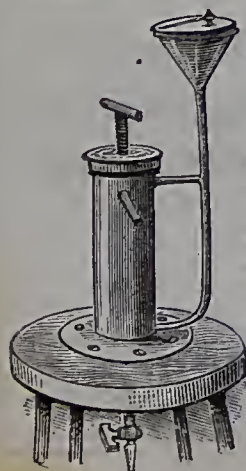
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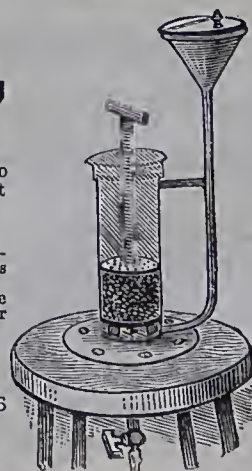
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